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**The moderating influence of social factors in
impulsive buying behaviour: Development of a scale
to measure social and non-social impulsive buying
tendencies**

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M.Sc. Organisational Psychology

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Abstract

Impulsive behaviour accounts for a significant percentage of retail sales, yet it may contribute to consumer debt and affect psychological wellbeing. Existing research indicates that impulsive buying presents as trait behaviour that influences the likelihood of experiencing impulsive urges and making purchases. Many studies have also examined the interaction of different variables with the impulsive buying tendency and the effects on behaviour during shopping. However, there is a lack of research into how social and emotional factors interact with or moderate the impulsive buying process. Accordingly, this thesis focuses on the role of social influence and emotion in impulsive buying. A mixed-methods approach is used, comprising a three stage data collection process involving interviews, scale development and a quasi-experiment.

The data collection process leads to the development of two scales measuring social and non-social impulsive buying tendencies. These new tendencies are initially identified through semi-structured interviews with impulsive buyers, which suggest that there may be social and non-social aspects to the impulsive buying tendency. A two phase process of scale development is then used to develop psychometric measures of the social and non-social aspects. The scale development results in two internally valid and reliable scales which correlate as expected with the existing impulsive buying tendency.

The scales are tested using a quasi-experimental study, the results of which indicate that the social impulsive buying tendency exhibits stronger correlations with hypothesised behaviour in social situations than the existing *buying impulsiveness scale* (Rook & Fisher, 1995). These findings suggest that the social scale could be used alongside an existing impulsive buying tendency scale to record consumers' social and non-social impulsivity. Among the implications of these findings is that researchers who study impulsive buying should consider recording the social context of shopping to test for the moderating influence of social factors.

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1. Chapter one: Introduction

Impulsive buying has considerable significance for both for retailers and consumers. For consumers, impulsive buying can be an enjoyable experience but can also lead to negative psychological and financial consequences. A study of over 109,000 U.K consumers (Fenton-O'Creevy & Furnham, 2012¹) indicates that impulsive buyers are three times more likely to be declared bankrupt. Furthermore, impulsive buying has more influence on the ability of consumers to make ends meet than their financial knowledge, education, income and social class combined. Consequently, impulsive buying appears to have wider societal implications beyond the individual as the behaviour is contributing to mounting U.K consumer debt. For example, *The Money Charity* (2012)² report that personal debt levels in November 2011 stood at £1.451trillion, with average household debt excluding mortgages, of £7,982. Average consumer borrowing in November 2011 (credit cards, unsecured loans, motor and retail finance deals, and overdrafts) was also listed as £4,225 per U.K adult. In November 2015 personal debt levels were recorded as £1.456tn and the total credit card debt in the U.K was £62.8bn (*The Money Charity*)

Despite the potential for negative financial consequences, impulsive buying is an important consumer behaviour for retail. Impulsive behaviour accounts for around 50% of sales revenues (Xiao & Nicolson, 2011) and Luo (2005) reports that up to 80% of sales in some product categories stem from impulsive buying. Furthermore, studies of mall shoppers indicate that around 60% of shoppers make an unplanned purchase (Evans, Christiansen & Gill, 1999). Therefore, impulsive buying has positive implications for retailers but also negative implications for consumer and society. Despite its significance, there are a number

¹ This study was conducted in collaboration with the BBC

² Retrieved 05/2012, from <http://themoneycharity.org.uk/moneformy-statistics/may-2011/>

of potentially important theoretical gaps in the literature on impulsive buying. In particular, the moderating role of social or emotional factors during the impulsive buying process is largely unknown (Xiao & Nicholson, 2013). Therefore, this thesis addresses the limited understanding of social and emotional factors in impulsive buying behaviour.

1.1 Background

Impulsive purchases stem from a spur-of-the-moment desire to act, psychological conflict and a lack of consideration for the consequences (Rook & Hoch, 1985). Early research on impulsive consumption mainly concentrated on products bought on impulse, but over time there has been a shift in focus to the impulsive consumer. As a result of these studies, researchers now recognise that consumers who engage in impulsive buying are considered to exhibit more “unreflective” and “spontaneous” traits (Rook, 1987). The impulsive buyer is described as experiencing a sudden, persistent and powerful urge to buy.

The shift in focus from the product to the consumer has led researchers to identify a relatively stable impulsive buying tendency, which can be assessed using psychometric measures (e.g., Verplanken & Herabadi, 2001). Consumers who exhibit a strong impulsive buying tendency are more likely to experience impulsive urges across different situations and are more likely to act upon their urges. The impulsive buying tendency interacts with personal and contextual antecedents to influence the experience of impulsive urges, subsequent impulsive purchases and eventual psychological and financial outcomes.

Impulsive buying is often described by consumers as an enjoyable experience and frequent impulsive buyers may simply enjoy the experience more than those who are less impulsive (Rook, 1985). Accordingly, consumers who engage in recreational forms of shopping are more likely to make an unplanned purchase (e.g., Bloch, Ridgway & Dawson, 1994). Given the hedonistic aspects of the behaviour, researchers have identified that there

are strong emotional facets to impulsive buying. Therefore, researchers have explored whether impulsive buying is used to regulate positive or negative emotions or moods. Recent research indicates that consumers may engage in impulsive buying as a form of prevention or promotion focused regulation aimed at improving or retaining a mood state (Fenton-O'Creevy & Furnham, Dibb & Davies, 2012).

Research into impulsive buying has primarily focused on variables which interact with the impulsive buying tendency, or on variables which affect impulsive urges and purchases. Research into the impulsive buying tendency indicates that trait impulsive buying is related to high general impulsivity, low conscientiousness and high extraversion (e.g., Verplanken & Herabadi, 2001). As impulsive buying is strongly related to behavioural impulsivity, researchers have suggested that individual self-control is a key factor in how consumers react to impulsive urges (e.g., Vohs, 2006). Furthermore, impulsive buying may occur due to a conflict between short and long-term preferences that is affected by self-regulatory resources. Rook and Fisher (1995) argue that the relationship between an impulsive urge and purchase is also affected by social norms. Accordingly, if a consumer thinks that their purchase will be judged negatively, they may be more likely to resist that urge. Emotional distress may also tip the balance in favour of an impulsive purchase to improve a low mood (e.g., Baumeister, 2002b).

Research on antecedents which affect impulsive urges, or purchases, indicates that there are multiple factors which can influence impulsive behaviour. For example, increased browsing time, sales-person interaction, positive and negative emotions or moods, and positive perceptions of available money have all been cited as potential precursors to an impulsive urge or purchase (e.g., Youn & Faber, 2000). While there is a considerable body of research relating to impulsive buying antecedents, there is a relative lack of research into how potentially important moderating factors influence other variables (Xiao & Nicholson,

2013). Where research has been conducted on impulsive urges or purchases the independent variables have largely been explored in isolation. Consequently, few researchers have attempted to develop models of the impulsive buying process or consider how variables interact (e.g., Beatty & Ferrell, 1998).

Given the important role of social factors in shopping generally, it is possible that they could exert an underlying moderating influence on impulsive buying behaviour. Yet, current research rarely acknowledges the social context, and many studies do not make any mention of how social variables can influence impulsive behaviour. Consequently, the role of social factors in impulsive buying and how they interact with other variables is not fully understood. Current research points to an important role for social influence in general consumption and shopping is often described as a social activity (e.g., Evans, Christiansen & Gill, 1999). Socialising is also a primary motivation for some people to go shopping (e.g., Bäckström, 2006). However, research into how social factors influence impulsive buying behaviour has largely been restricted to peer or family influence (e.g., Luo, 2005) and social norms (e.g., Rook & Fisher, 1995). As a result, the majority of evidence relating to social influence in impulsive buying concerns social encouragement or social discouragement aspects (Amos, Holmes & Keneson, 2013).

A moderating influence of social factors could affect the types of social situations in which a consumer usually shops, or their reaction to shopping alone or with others. Social factors could also influence how other variables impact on impulsive urges, such as the enjoyment of the social shopping experience. For example, some consumers may prefer to shop alone and thus avoid shopping with others. Put simply, consumers may be more or less impulsive in different social situations. The strong role for emotion in impulsive buying also suggests that emotion or moods could influence impulsive buying in ways not currently acknowledged, e.g., there could be an important interaction between social situation and

emotions or moods. If a consumer prefers to shop alone they may experience fewer positive emotions when shopping with others.

If social or emotional factors moderate the impulsive buying process, then the current understanding of impulsive buying in the literature is incomplete; thus there are implications for theory and research. For example, researchers currently acknowledge the role that increased browsing time has on impulsive urges (e.g., Beatty & Ferrell, 1998). However, the influence of browsing could also be dependent on the social situation. For example, consumers who shop to socialise could browse more with companions than when alone. Importantly, there could be a social moderating influence between the impulsive buying tendency and impulsive behaviour beyond any currently recognised peer effect (e.g., Luo, 2005). Consequently, there is a need for research which studies the social context of shopping to gain a fuller understanding of how these variables impact on impulsive buying.

A moderating influence of, or interaction between, social or emotional factors could also have implications for practice. There is already evidence of a link between impulsive buying and consumer debt (Fenton-O'Creevy et al, 2012). Impulsive buyers also report a number of negative psychological outcomes, including distress, guilt and depressive symptoms which can lead to the adoption of coping strategies (e.g., Bayley & Nancarrow, 1998). Therefore, research that considers the underlying moderating factors of the impulsive buying process could help to identify how, and in what circumstances, impulsive buying becomes problematic. Such insights could be used to develop interventions to help impulsive buyers reduce their behaviour. For example, furthering understanding of the underlying influences of impulsive buying may assist in better targeting advice for resisting impulsive urges.

As impulsive behaviour accounts for a significant percentage of retail sales improving understanding of the impulsive consumer may also be important for retailers. Such knowledge may be especially relevant given the negative impact of the 2008 recession on the U.K, which led to economic downturn and mixed reports for retail (e.g., Allen: The Guardian, 2010; Seager: The Guardian, 2008). Following the recession, declining levels of disposable income led to changes in U.K consumer spending habits (e.g., Felsted: The Financial Times, 2011). As a result retail sales fell, with 46% of U.K retailers recording reductions in sales in August 2011³. Although retail sales picked up by 6.4% in November 2014⁴, shoppers still reported cutting back in some areas (Neate: The Guardian, 2014). If consumers find themselves with less disposable income, then there could be increasing competition as to where they spend money. Therefore, developing a better understanding of how social or affective factors moderate impulsive behaviour could enable retailers or marketers to attract or retain consumers.

1.1.1 Research question

The lack of research into the moderating influence, or interaction of social and emotional factors in impulsive buying motivates the overarching research question:

How do impulsive buyers understand the social and emotional influences on their impulsive buying behaviour?

Two sub-questions are developed in the course of the study which focus on the social and non-social aspects of impulsive buying:

Sub-question 1: Do individuals exhibit different impulsive buying tendencies that are then most likely to be displayed in social situations for some individuals and non-social situations for others?

³ Retrieved, 11/2011 <http://www.cbi.org.uk/media-centre/news-articles/2011/08/distributive-trades-survey-august-2011/>

⁴ Retrieved 01/2014 <http://www.ons.gov.uk/ons/rel/rsi/retail-sales/november-2014/stb-rsi-november-2014.html>

Sub-question II: Can social and non-social forms of the impulsive buying tendency be measured by a psychometric scale?

1.2 Research approach

I will apply a pragmatic paradigm to explore the social and emotional aspects of impulsive buying. Consequently, a mixed-methods research design will be used to enable both inductive and deductive stages of data gathering. At the start of the project the exact direction of the project was not known and the second and third phases of data collection are guided by the preceding data collection stage. The following stages of research will be explained in the chapters that follow: firstly, a series of qualitative interviews of impulsive buyers will be used to explore the research question and provide background data in its own right. Thematic analysis of the interview data will be used to highlight the importance of social and non-social aspects of impulsive buying. Accordingly, I will categorise the social and non-social forms of the impulsive buying tendency and use the existing literature to develop a nomological network for these constructs.

In the second stage of the data collection, I will explore the potential social and non-social constructs through a two phase scale development process, using exploratory factor analysis in the phase one and confirmatory factor analysis in the phase two. As the thesis will show, the scale development process leads to a social impulsive buying scale and non-social impulsive buying scale, both of which demonstrate good validity and internal reliability. Consequently, I will explore the predictive validity of the scales in the third and final stage of data collection. In stage three, I will use a repeated measures quasi-experiment using hypothesised buying scenarios. The data will be analysed using correlational analysis, multiple regression and ANCOVA.

1.3 Thesis chapter guide

The thesis is organised into seven chapters as follows:

Chapter one: Introduction

The first chapter covers the background to the project and impulsive buying, the research methods, and a thesis guide.

Chapter two: Literature review

In chapter two I review existing literature relating to impulsive buying, consumer behaviour and decision making. I discuss the impulsive buying process model in detail and integrate existing findings into the antecedents, triggers/urges, buying and outcomes phases of the process. I then identify a knowledge gap relating to social and emotional factors.

Chapter three: Methods

The methods chapter sets out my pragmatic paradigm. I consider issues of validity, reliability, and sampling in research. I then discuss competing qualitative and quantitative methods, before reviewing the final mixed methods design. I then discuss competing and final methods for each of the three stages of data collection

Chapter four: Qualitative interviews

Chapter four details the first stage of data collection and the resulting conceptualisation of social and non-social aspects of impulsive buying. The major themes of social influence, emotions and moods, enjoyment, and outcomes resulting from impulsive buying are discussed. I then conceptualise social and non-social aspects to the impulsive buying tendency. I discuss the results and justification for the subsequent scale development process.

Chapter five: Scale development

Chapter five introduces the phase one and phase two of scale development. I discuss a pilot of the scale items and list the item pool in table 5.1, and item provenance in appendices 3a and 3b. I discuss the details of phase one of data collection, including the initial refinement and validation of the item pool. I then describe phase two of data collection, including analysis of the nomological network and associated hypotheses. Finally, I integrate and discuss the results leading to the reasoning for the third and final stage of data collection that is discussed in chapter six.

Chapter six: Quasi-experiment

Chapter six provides details of the quasi-experimental hypothesised buying scenarios used in the third stage of data collection. I discuss a pilot of alternative social and non-social impulsive buying scenarios and provide details of the final scenario designs. I then describe the data collection, results and analysis, and finally provide a brief discussion.

Chapter seven: Discussion and limitations

Chapter seven integrates the findings from the three stages of data collection. I first discuss the findings in relation to existing research. I then discuss the theoretical and research contributions, and discuss the practical implications. Finally, I critically reflect on the project and consider future research directions.

2. Chapter two: Literature review

2.1 Introduction

Impulsive buying is a profitable behaviour for retailers, with around 50-60% of sales revenues due to unplanned buying (Luo, 2005; Inman, Winer & Ferraro, 2009; Xiao & Nicholson, 2011) and around 60% of shoppers making unplanned purchases (Nicholls, Li, Kranendonk & Roslow, 2002). However, the behaviour also contributes to significant negative financial outcomes (Fenton-O'Creevy, et al, 2012) and psychological distress for consumers (e.g., Bayley & Nancarrow, 1998). Consequently, I reviewed both the impulsive buying and general consumer behaviour literatures. Through this review I identified gaps in knowledge concerning the moderating influence of social and emotional variables in impulsive buying behaviour. I discuss these gaps in this chapter and introduce the reader to the general impulsive buying literature via a discussion of the impulsive buying process model. The process model refers to the antecedents, urges, buying, and outcomes phases of impulsive buying behaviour. Accordingly, I have classified the literature as broadly relating to one or more of these phases. Methodological issues are also identified that influence the validity and implications of existing impulsive buying research. A discussion of the full body of impulsive buying literature is necessary, as my central argument relates to the potential moderating role of social and emotional variables across the entire impulsive buying process. Consequently, my justification for the direction of the project relates to research from the full field of impulsive buying literature.

The chapter is structured as follows: firstly, I provide a general overview of impulsive buying behaviour. I also define impulsive buying in a way that could resolve some of the existing discrepancy in definitions. Following this, the human decision making and rationality literature is discussed in order to provide context for some of the later discussion.

The literature relating to the impulsive buying process model is then introduced and I highlight ambiguities within the literature. I identify social and emotional variables as potential moderating influences, and consider the potential academic and practical significance of these variables. Finally, the initial direction of the project is specified through a summary of the literature and the research question is introduced.

2.2 Criteria for research inclusion and exclusion

I have focused on impulsive buying as the main area of research within this review. However, I also refer to two secondary broad areas, namely: 1) general consumer behaviour, and 2) human decision making. I have drawn the majority of papers from the impulsive buying field and supplemented these with significant papers from the two secondary areas. In order to identify impulsive buying papers three criteria were used. Firstly, I focused on papers with impulsive/impulse buying as the primary theme by using keyword searches⁵ and abstract reviews. Secondly, I used citations and abstracts to identify important papers from within the impulsive buying field and I draw on these as the core evidence for the review. Accordingly, I have critically examined relevant papers but also synthesise information from less directly relevant, or more recent and less well cited papers for use alongside the core papers. I followed this approach to develop a description of impulsive buying that incorporates a broad review of the behaviour as a process and a detailed review of relevant paper within that process. Thirdly, after identifying gaps in the literature I focused the search on the social and emotional elements of impulsive buying and widened the scope to explore these elements in the general consumer literature. The literature review developed iteratively as I revisited the literature during the qualitative data collection stage of the project. During

⁵ I used variations on: "impulsive buying", "impulse buying" "impulsive buying behaviour" and "unplanned buying", "planned buying". I substituted "buying" for one of: "purchasing", "consumption", or "consumer".

this stage I focused on the social and non-social nature of impulsive buying to examine the issues I identified during the qualitative data collection stage. I used this iterative process to support my categorisation of the social and non-social aspects of impulsive buying. Therefore, the literature review was also a guide for the nomological network I developed during the scale development data collection.

2.3 Impulsive buying behaviour

Initial research on impulse buying largely characterised the behaviour as “unplanned” purchasing. As a consequence, researchers tended to focus on the types of products that could be considered “unplanned purchases” (e.g., Applebaum, 1951; Bellenger, Robertson & Hirschman, 1977; Kollat & Willett, 1967). The categorisation of impulse buying as “unplanned” incorrectly defined many non-impulsive purchases as impulsive (Rook & Hoch, 1985). To clarify the behaviour, Rook and Hoch describe five elements they argue define the impulsive buying process, namely: a sudden and spontaneous desire to act, a state of psychological dis-equilibrium, psychological conflict and struggle, a reduction of cognitive evaluation, and a lack of consideration for consequences. The shift in focus from the impulsive product to the impulsive consumer has allowed for a more comprehensive evaluation of impulse buying. Rather than being concerned with impulsive products, researchers now consider the psychological, environmental and situational antecedents that influence consumers.

Impulsive buying is distinct from non-impulsive, or planned buying in a number of key ways. Firstly, Rook and Fisher (1995) suggest that impulsive buying occurs when buyers shop more openly and are receptive to sudden buying ideas. Furthermore, impulsive buyers are more likely to act based on physical proximity to a product. Thus, a non-impulsive consumer may act with a particular product or products in mind and be less likely to experience spontaneous buying intentions. Importantly, non-impulsive consumers are also

less likely to act upon urges when they are experienced. While impulsive buying is necessarily unplanned buying, not all unplanned buying may be considered as impulsive. For example, a consumer shopping in a supermarket may purchase items they had not intended to when entering the shop because the products are currently being offered on promotion. Consumers may also make “reminder” purchases, where an apparently unplanned product is bought because the consumer is reminded they need the item when they happen to see it in store (Rook & Hoch, 1985). Many supermarkets place typical reminder products in locations where they will be most likely identified

Rook and Hoch’s (1985) early definition of impulsive buying elements lead to a widely cited definition by Rook (1987, p.191), who describes impulse buying as occurring when: “a consumer experiences a sudden, often powerful and persistent urge to buy something immediately”. However, definitions of the impulsive buying process also differ across disciplines (Xiao & Nicholson, 2013). Researchers have since re-conceptualised impulsive buying to suit their proposed theory or their area of research. For example, Beatty and Ferrell (1998, p.170) suggest that “impulse buying is a sudden and immediate purchase with no pre-shopping intentions...the behaviour occurs after experiencing an urge.” Baumeister (2002b, p.670) describes impulsive purchasing as relating to self-regulation and as: “a sudden urge to buy...without advance intention or plan...and acting on this impulse without considering whether the purchase is consistent with long range goals.” More recently, Verhagen and Dolen (2011) suggest two elements characterise impulse buying: firstly, that it is unplanned and lacks cognitive deliberation. Secondly, that the buying process is dominated by emotions.

For the purposes of this thesis I use the definitions provided by Rook and Fisher (1995) and Beatty and Ferrell (1998) to define the actual act of impulsive buying. I therefore use the following definition: *impulsive buying occurs when a product is bought due to a*

sudden, powerful and persistent urge to buy immediately, and without any pre-shopping intentions. In considering the process of impulsive buying, I draw on a number of elements identified by other researchers (e.g., Xiao & Nicholson, 2013). Describing impulsive buying as a process separates the behaviour into the antecedent variables of impulsive urges and the variables which then affect the outcome of an urge. I also include the potential for repeated behaviour associated with positive or negative impulsive buying post-purchase outcomes. These three elements are important for my study as I argue that the antecedents and variables can affect impulsive behaviour across the entire buying process. Thus, where I refer to the impulsive buying process I define this process as:

Impulsive buying behaviour involves personal and contextual antecedents that give rise to a powerful and persistent urge to purchase an unplanned product. Whether or not a consumer acts upon their urge is then affected by personal and contextual variables. The process can lead to both positive and negative outcomes and repeated impulsive urges.

Many researchers now acknowledge a relatively stable impulsive buying trait that influences buying behaviour across different situations and product categories (Bayley & Nancarrow, 1998; Beatty & Ferrell, 1998; Jones et al, 2003; Rook & Fisher, 1995; Verplanken & Herabadi, 2001; Silvera, Lavack & Kropp, 2008; Youn & Faber, 2000). Consumers scoring highly on this trait experience more buying urges and are more likely to act upon them than consumers with lower scores (Rook & Fisher, 1995). Consequently, a number of psychometric scales have been developed to measure this tendency, including: Rook and Fisher's (1995) *Buying impulsiveness scale*, Verplanken and Herabadi's (2001) *Impulsiveness buying tendency scale*, and Wuen, Jones and Beatty's (1998) *Impulsive buying tendency scale*. Some researchers advocate dividing the tendency into separate cognitive and affective components (Verplanken & Herabadi, 2001; Verplanken, Herabadi, Perry & Silvera, 2005). The cognitive and affective facets appear to be associated with different

antecedents. For example, Verplanken and Herabadi (2001) report that the cognitive facet is correlated with low conscientiousness and the affective facet is correlated with a lack of autonomy. More recent research indicates that the impulsive buying tendency also correlates with online based impulsive purchasing (Dawson & Kim, 2009). Consequently, Rook and Fisher's *buying impulsiveness scale* has been adapted to specifically measure online impulsive buying (Sun & Wu, 2011; Wells et al, 2011).

2.3.1 Theoretical approaches in impulsive buying research

Impulsive buying provides profitable opportunities for retailers (e.g., Kacen, 2003; Luo, 2005; Xiao & Nicolson, 2011), yet the relative complexity of the behaviour presents a challenge for researchers. As a result, diverse academic and practitioner disciplines have sought to explain how and why impulsive buying occurs. The majority of research has been conducted from marketing, retailing, and/or psychology perspectives. Researchers from marketing and retailing perspectives have frequently concentrated on studying how retail stores can encourage consumer impulsivity. For example, Beatty and Ferrell (1998) investigated the pre-cursors of impulse buying and argue that their results have important implications for shop managers, i.e., "...the profiles of high impulsives or recreational shoppers may be identified, so that promotions and events can be targeted at these individuals" (Beatty & Ferrell, 1998. p.188). Furthermore, Bayley and Nancarrow (1998) created a typology of impulsive buying that may be appropriate for "indicating marketing tactics" (1998. p.113). However, some researchers also acknowledge the potential negative outcomes of impulsive behaviour (e.g., Puri, 1996). For example, Silvera, Lavack and Kropp (2008) report that the impulsive buying tendency is related to emotional instability and suggest that the general view of impulsive buying as harmless may be misleading. Researchers exploring these negative outcomes have offered advice for consumers seeking to alter their potentially damaging impulsive buying behaviour (Yi & Baumgartner, 2011). One of the consequences of these different perspectives and theories is that there are a

number of contradictory research results relating to impulsive buying behaviour. Throughout the review I reconcile some of these contradictions by examining alternative theories. I also consider how frequently used research methods within the impulsive buying field may have led to ambiguity.

2.3.2 Impulsive buying research methods and sampling

There are two broad method approaches that have been used to explore in-store impulsive buying, namely: 1) survey/questionnaire, and 2) field study. Questionnaire based studies with correlational statistical analysis are the most popular method within the impulsive buying field (Amos, Holmes & Keneson, 2013⁶). Researchers using field study methods have primarily gathered data during or immediately following the impulsive purchase (e.g., Beatty & Ferrell, 1998). Questionnaires have primarily been used to gather data about recalled impulsive buying, or used to explore correlations between variables in non-shopping environments (e.g., Youn & Faber, 2000). I discuss the advantages and limitations of typical research methods in detail in the next chapter. However, it is important here to note some of the more prominent issues. In particular, questionnaires measuring recalled behaviour or analysing variable correlations might not necessarily reflect how people behave in real-world settings (Black, 1999). Furthermore, even impulsive buying researchers using field-study methods have often asked participants to recall pre-purchase antecedents after the impulsive purchase (e.g., Beatty & Ferrell, 1998). Consequently, the participants may not have been in a position to accurately recall specific factors leading to the purchase.

There are also issues associated with the frequent use of undergraduate student sampling in impulsive buying research (e.g., Luo, 2005; Silvera, Lavack & Kropp, 2008).

⁶ Amos, Holmes and Keneson (2013) report that 204 effects in the impulsive buying literature are based on scale data and 141 are based on actual or hypothesised behaviour.

Research by Peterson (2001) indicates that the effect sizes (both in direction and magnitude) of social science studies using student populations differed from effect sizes of studies using non-student populations. Consequently, caution must be applied when using student data to infer how non-students may behave. Student sampling might be especially detrimental for the validity of research on impulsive buying. For example, the social lives, behaviours and financial situation of students are likely to be somewhat different to non-student populations. Therefore, it may not be valid to generalise student consumption behaviours to non-student populations. In this literature review, I identify a lack of research on underlying social and emotional variables during the impulsive buying process. The use of undergraduate student sampling to explore how social factors influence impulsive buying represents a key aspect of my critique of current research. Accordingly, I highlight where student samples have been used in research and consider how the sampling could have affected the results.

2.3.3 Impulsive and compulsive buying

An important issue to consider is the distinction and similarity between impulsive buying and compulsive buying. Compulsive buying has been defined as an “inability to control an overpowering impulse to buy” (O’Guinn & Faber, 1989, p.147). Some researchers use the terms impulsive and compulsive interchangeably, while others see impulsive buying as a less extreme version of compulsive buying (Dittmar, Beatty & Friese, 1996). Another group considers impulsive buying to be a facet of compulsive buying and discuss the primary differences in terms of outcomes or processes (e.g., Vohs & Faber, 2007). For example, Thomson and Prendergast (2015) describe impulsive buying as a milder version of compulsive buying due to the less severe outcomes. As compulsive buying is regarded by some researchers as an extreme version of impulsive buying, there is value in reviewing some of the compulsive buying literature.

Faber and Vohs (2004) suggest that both impulsive and compulsive buying result from failed efforts at self-control. They also argue that impulsive purchases are single violations often related to a lack of regulation, whereas compulsive buying is a chronic lack of regulation due to conflicting goals. The implication is that the distinction between the two behaviours is related to the frequency with which each occurs. From a non-academic perspective there might also be a difference in how the terms are understood by consumers. Compulsive buying might be seen as even more negative and pathological when compared to impulsive buying (e.g., Verplanken & Herabadi, 2001). As a result, impulsive buying may be regarded as less problematic than compulsive buying and could be seen as harmless (e.g. Silvera, Lavack & Kropp, 2008). Accordingly, Rook and Fisher (1995) suggest that consumers see impulsive buying as a positive behaviour in some situations. While impulsive buying may have fewer negative connotations compared to compulsive buying, both behaviours can result in similar negative outcomes. For example, both impulsive and compulsive buyers report negative psychological outcomes, such as guilt and shame associated with their behaviour (e.g., Billieux et al, 2008; Yi & Baumgartner, 2011).

The negative outcomes associated with impulsive buying can stem from single purchases and could result in repeated impulsive buying to regulate affect (e.g., Xiao & Nicholson, 2011). Therefore, impulsive buying has been considered to be a predictor of compulsive buying (e.g., Dittmar 2005). However, Xiao and Nicolson (2013) suggest that this does not necessarily take into account the potential positive or negative outcomes of impulsive buying. Xiao and Nicholson further argue that researchers should explore repeated impulsive buying to address when impulsive buying may become compulsive. For the thesis, I have adopted the definition by O'Guinn and Faber (1989) which suggests compulsive buying is an overpowering inability to control an impulse to buy. I also adopt the view that compulsive buying could be associated with outcomes of impulsive buying,

but that when this occurs or where the distinction lies between the behaviours is not entirely clear (e.g., Xiao & Nicholson, 2013).

2.3.4 *Human decision making, rationality and impulsive buying*

The deviation between the “rational” and the impulsive consumer represents one of the more challenging aspects of impulsive buying for researchers. Impulsive buying has been described as an irrational behaviour, distinct from considered and rational consumer behaviour, e.g., “...when consumers act rationally and when they act impulsively” (Hofmann, Strack & Deutsch, 2007, p.22). Normatively rational consumer decisions are considered to result from a careful consideration of the consequences, and logical, ordered steps (Bazerman & Moore, 2009; Gilovich, Griffin & Kahneman, 2002). However, impulsive buyers are spontaneous, unreflective, and act based on their feelings rather than a consideration of the future (Baumeister, 2002b; Rook, 1987). I have reviewed models of decision making and rationality which provide a framework for understanding how some antecedents act on consumers to influence impulsive buying.

Bell, Raffia and Tversky (1998) discuss the distinction between prescriptive, descriptive, and normative approaches to understanding decision making. Descriptive models seek to explain how people behave and how their biases and foibles will influence decision making, but do not attempt to influence how a person behaves. By explaining how a person behaves in real life and by understanding decision making we can potentially highlight where errors are made and where better strategies are needed (Bazerman & Moore, 1993). Accordingly, prescriptive models assist people with decision making by providing steps for improvement and these models take into account the limited capabilities of decisions makers. Normative models provide idealised processes for how decisions should be made and these models are judged on their ability to provide (near) optimal outcomes for decision makers (Bell et al, 1998). Normative models can also be considered as useful

standards for behaviour such that if decision makers meet these standards they will arrive at the optimal action (Stanovich, 1999). Normative models have also been described as prescriptive models for idealised people (Baron, 2005). I have focused on three general theories of human reasoning and decision making which are relevant to theories of impulsive buying, namely: normative rationality; dual-process models; and bounded rationality.

2.3.4.a Normative rationality

Normative decision making models define decision making as consisting of stages or processes that a fully rational person is expected to follow to arrive at an optimum outcome. Simon (1993) defines the decision making process as encompassing three classes: firstly, identifying problems that require attention and attending to them; secondly, distinguishing between solutions to the problem; and, finally, evaluating the potential solutions to choose between them. Bazerman and Moore (1993) further describe six stages to rational decision making: 1) defining the problem, 2) identifying criteria, 3) weighing criteria, 4) generating alternatives, 5) rating alternatives, and 6) computing the optimal decision. To fully attain a normatively rational outcome, the above steps must be completed without errors. If a person cannot fully identify the objectives or cannot accurately weigh them, then they will not achieve the optimum decision. Consequently, normative models assume consistency across decisions because of the rational processes that are supposedly utilised (De Martino et al, 2006). Errors or biases in judgment are, therefore, unsystematic (Gilovich, Griffin & Kahneman, 2002). Normative models also place considerable emphasis on the decision maker's capabilities. Simon (1955) says of traditional economic theory, that rational decision makers were presumed to have relevant knowledge of their environment and "a skill in computation that enables him to calculate" (Simon, 1955, p.99).

Due to human limitations, errors or deviations from normative models are frequent (Kahneman & Tversky, 1979; Stanovich & West, 1999; 2000). However, proponents of

normative models have argued that errors of inappropriate norms provide one explanation for why deviations occur (Levi, 1983; Lopes, 1981; Messer & Griggs, 1993). Furthermore, Cohen (1981) argues that normative models are related to human reasoning and the models arise from intuition about what is good reasoning. Therefore, normative and descriptive model deviations are due to errors caused by errors of application or by a decision maker's (mis)understanding of the problem. The discrepancies between normative and descriptive models are considered by some researchers to be indicators of systematic human irrationality (Stanovich & West, 2003). However, Stanovich (1999) argues that deviations from normative models do not suggest irrationality, but rather that normative models do not take into account human limitations. He cites Harman (1995) who argues that ideal rationality is not possible, because humans are limited beings.

2.3.4.b Dual-process models

Dual-process models of decision making and reasoning separate decision making into two processes. These have been labelled: intuitive and analytic (Hammond, 1996), heuristic and analytic (Evans, 1984; 2006), reflexive and reflective (Lieberman, 2003), and most frequently system 1 and system 2 (Stanovich & West, 2000). System 1 processes are automatic, intuitive, and relatively effortless, require less computational capacity, and are guided by affect. System 2 is more controlled, effortful, requires more computational capacity and is more logical (Kahneman, 2003). People may rely on the automatic processes in system 1 for everyday situations (Stanovich & West, 2003). However, system 2 is involved in all judgments that we make and all decisions are endorsed by system 2 (Kahneman, 2003). The system 2 monitoring system is fairly lax and errors can be made quite frequently (Kahneman & Frederick, 2002).

Affect plays a central role in dual-process theories and one of the characteristics of system 1 (e.g., Epstein, 1994: "Experiential") is its affective basis (Slovic, 2006). The

affective role in system 1 may help to unconsciously guide decisions and assist with reasoning. There is evidence from studies on brain-damaged patients, with a reduced capacity to feel emotions, that emotion is vital in the decision making process. For example, Damasio (1994) reports the case of a patient suffering frontal lobe damage who was subsequently unable to experience emotions. This lack of emotional capacity led to difficulty with decision making despite the individual's intellectual capacity remaining intact. This and similar cases illustrate the importance of emotion in decision making. The appropriate use and engagement of system 2 is also related to cognitive ability (e.g., Stanovich 1999; Stanovich & West, 1998; West & Stanovich, 2003). Furthermore, Evans (2006) proposes that people generate models or hypotheses using preconscious heuristic processes. Evan's approach to reasoning extends to decision making and suggests that decision makers attempt to reach satisfactory decisions, rather than considering all possible outcomes and alternatives (Simon, 1979).

2.3.4.c Bounded rationality

Simon's (1957) seminal work "Models of Man: Social and Rational" was the beginnings of one of the most compelling accounts of human reasoning and decision making; namely, "bounded rationality." Simon argues that human decision making is bounded in its rationality and "because of psychological limits of the organism...actual human rationality-striving can at best be an extremely crude and simplified approximation to the kind of global rationality that is implied, for example, by game-theoretical models" (Simon, 1957, p.243). Bounded rationality, however, does not propose that deviations from normative models are irrational. Accordingly, Gigerenzer and Selten argue that bounded rationality is "neither optimization nor irrationality" (2002, p.4) but rather it forgoes the notion of optimisation altogether. Simon (1982) argues that perfect knowledge has been replaced by the assumption of perfect knowledge. Limitations of rationality reflect a lack of complete information and the complexity of the environment.

One of the central tenets of bounded rationality is that decision makers seek to reach a satisfactory outcome, rather than an optimal outcome as proposed by normative models. This “satisficing” (satisfying and sufficing) approach takes into consideration human cognitive limitations and the tendency of human decision makers to simplify the real world as much as possible. Simon (1956) argues that the environments in which decision makers adapt possess properties which may permit further simplification. As a consequence, a person may seek to reach a satisfactory decision by using simplifying tactics aimed at adapting to and taking account of their environment. To clarify bounded rationality models, Gigerenzer and Selten (2002) argue that they typically encompass 1) *Simple search rules*: these rules are step-by-step procedures whereby information is acquired. 2) *Simple stopping rules*: the search for information is stopped by simple rules, such as choosing the first object a person feels fits in with their current needs. 3) *Simple decision rules*: once the search has been stopped by the stopping rules then a decision is made on the basis of a simple rule.

2.3.4.d Consumer rationality and impulsive buying

We would expect a normatively rational consumer to 1) identify needs or goals addressed by a product, 2) identify products, 3) seek out alternatives, 4) evaluate alternatives, 5) form the buying intention, and, finally 6) contact the seller (Wood, 1998). These steps should lead to the optimal product choice, fewer buying mistakes and higher satisfaction with the product purchased. However, early research into rational consumer behaviour implies that myopic consumers may discount the future leading to inconsistent choices. For example, Strotz (1956) suggests that inconsistencies in planning and immediate desires can lead to a consumer becoming a spendthrift. After recognising such inconsistency a rational consumer should employ strategies to deal with myopic consumption behaviour, such as pre-commitment to future actions. However, Ohanian and Tashchian (1992) suggest that consumers are not usually rational decision-makers and adopt the “satisfying” approach described by Simon (1982). Some consumers may also be described as “recreational”

shoppers, who enjoy the experience of shopping and spend more time browsing; which can lead to more unplanned purchasing (e.g., Bellenger & Korgoankar, 1980).

Problems can also arise for consumers due to the varied nature of the consumption experience and issues such as time constraints. Consequently, it is impractical for consumers to consider all of their daily shopping choices (Bazerman & Moore, 1993). For example, consumers might be faced with frequent price fluctuations when supermarkets introduce brand promotions. Rather than comparing multiple products during each shopping trip, some consumers will instead match purchasing to promoted brands (Erdem, Imai & Keane, 2000). Such purchasing decisions are classed as dynamically rational (Sun, Neslin & Srinivasan, 2002), as consumers adapt their purchasing habits to align with potential savings.

The reason a consumer intends to make a purchase is likely to affect the intended utility from that purchase. Consequently, some purchases may deviate from normative rationality, despite the value for the consumer. For example, typical utility might be related to price or function, yet for some consumers there may also be value associated with the *act* of purchasing (Baumeister, 2002b). Given the limitations of human reasoning and the complexity in decision making, it could be useful to move towards integrating impulsive buying within a theory of bounded rationality. Removing the distinction between the rational and irrational consumer and focusing on the reason for engaging in the impulsive buying process, could open up new perspectives as to why a consumer is impulsive. The reason for a purchase may not fit within the limits of normative optimisation, but could serve some other purpose that the consumer regards as rational. Gigerenzer (2000) suggests that arriving at a normatively optimal decision might not be the intention of a decision maker who is striving for different goals, such as establishing social relationships. For example, some consumers may use recreational forms of shopping as a means of socialising (e.g., Bäckström, 2006).

2.4 The impulsive buying process

The impulsive buying process consists of the antecedents phase, the triggers/urges phase, the purchase phase and the outcome phase (Xiao & Nicolson, 2013). Across this process researchers have sought to identify internal (person) and external (contextual or situational) variables that can lead to an impulsive purchase. The nature of these personal and contextual variables, and their influence on the antecedents, trigger/urges and buying phases, is where the majority of the impulsive buying research has focused. Accordingly, financial or psychological outcomes resulting from impulsive buying have received less attention (Xiao & Nicholson, 2013). While some researchers (e.g., Beatty & Ferrell, 1998) have sought to model the impulsive buying process, much of the research has focused on the influence of individual factors, such as social grouping (e.g., Luo, 2005).

2.4.1 *Antecedents phase*

During the antecedent phase of the impulsive buying process, person and group level variables influence the likelihood of a consumer experiencing urges and making an impulsive purchase. Within this phase, one of the strongest influences is a consumer's impulsive buying tendency (e.g., Rook & Fisher, 1995). Furthermore, the hedonistic aspect of the impulsive buying process is important for impulsive buyers. Many researchers emphasise that impulsive buying is a pleasurable experience (Hausman, 2000; Peck & Childers, 2006; Sharma, Sivakumaran & Marshall, 2010). Accordingly, more frequent impulsive buyers may simply enjoy impulsive buying more than the less impulsive (Rook & Hoch, 1985). As some consumers engage in impulsive buying for the pleasure of the experience, the actual product purchased can be less important than the act of purchasing (Hausman, 2000). Impulsive buyers may be more likely to be recreational shoppers, who see shopping as an enjoyable leisure activity (Bäckström, 2006). Recreational shopping is described as distinct from economic shopping, where consumers are more focused on saving

time, or money, and do not enjoy the experience (Bellenger & Korgoankar, 1980). However, recreational shoppers enjoy the experience more and have been found to engage in more browsing and unplanned purchasing than other consumers (e.g., Bloch, Ridgway & Dawson, 1994; Nicholls et al, 2002).

2.4.1.a Demographics

There is conflicting evidence concerning demographic influence in impulsive buying. A study of over 109,000 UK participants (Fenton-O'Creevy & Furnham, 2012) indicated that women and the under 21s are most likely to make an impulsive purchase. However, a recent meta-analysis suggested that age is only a minor influence in the impulsive buying process (Amos, Holmes & Keneson, 2013). The evidence concerning gender suggests it has a more significant role, but there are still contradictory results. In general, shopping is considered a female task by couples (South & Spitze, 1994), and females often hold responsibility for household shopping (Fram & Axelrod, 1990). Furthermore, Dholokia (1999) cites tracked shopping centre usage between the years of 1986-1991 that suggests a ratio of about 2:1 of female to male shoppers. Social norms can change over time, but more recent evidence indicates that females still show more hedonic shopping values than males (Carpenter & Moore, 2009; Jackson, Stoel & Brantley, 2010)

Early research indicated that when the total number of purchases were controlled for, men and women made the same number of impulsive buys (Kollat & Willet, 1967). This suggests that females may make more purchases in total, but that the percentage of impulsive purchases is similar for men and women. More current evidence does not suggest there are major gender differences in the impulsive buying tendency. Some studies have found no gender effects (e.g., Hausman, 2000), while other studies report women as exhibiting higher trait impulsive buying (e.g., Coley & Burgess, 1993; Silvera, Lavack & Kropp, 2008). Furthermore, Verplanken and Herabadi (2001) report female participants as exhibiting a

significantly higher impulsive buying tendency in one study, but not the other. A recent study by Pine and Fletcher (2011) suggests that women may tend to engage in more impulsive and excessive financial behaviours due to the impact of ovarian hormones. Pine and Fletcher correlated spending and saving with the menstrual phases of their participants. Their results indicate that the regulation of spending decreased during the menstrual cycle. Accordingly, women could exhibit more impulsive consumption later in their menstrual cycle.

Gender also appears to influence the type of product typically bought on impulse. Fairmaner and Dittmar (1993) report that male compulsive buyers tend to buy electronics or sports equipment, whereas women tend to buy clothes or cosmetics. Furthermore, Dittmar, Beatty and Friese (1995) found that the five most likely impulsive purchases in hypothetical shopping scenarios differed between men and women. Women's most and medium likely choices were more likely to be appearance or body related, and men's were more likely to be functional or leisure item related products. While utility and personal identity considerations were more important for the men, mood or enjoyment considerations were more important for the women. Dittmar et al's (1996) later study indicates that female participants again reported more psychological buying considerations, while male participants reported more functional buying considerations. Furthermore, Dittmar and Drury (2000) found that women shoppers discussed impulsive buying as being more emotional. However, Dittmar et al (1995) also found that both men and women selected clothes and music as the top two likely impulse buys. On reflection, there appear to be some impulsive product choice and buying consideration differences between the genders, but also some similarities.

A possible explanation for the discrepancy in results concerning gender may be the frequent use of biased sampling. For example, in three studies reporting females as being more impulsive the samples comprised more female participants than male participants

(Coley & Burgess, 1993; Dittmar, 1996; Silvera, Lavack & Kropp, 2008). The gender bias in these studies ranges from negligible (e.g., $F = 55\%$: Silvera, Lavack & Kropp), to significant (e.g., $F = 75\%$: Coley & Burgess). A sample with considerably more females than males indicates potential sampling bias, such as an underlying issue with the characteristics of people who are inclined to respond. Sampling bias can influence study results as the participants may exhibit particular behaviours, or dispositions. A biased sample is also likely to lead to validation issues with statistical analysis if the sample does not reach the minimum threshold required to detect an effect. Furthermore, the potential for social desirability effects to influence the way men and women complete scales of impulsive buying is rarely acknowledged. For example, the gendered view of shopping (e.g., South & Spitze, 1994) could result in men underreporting their impulsive buying or avoiding studies of consumer behaviour.

2.4.1.b Personality

Personality trait theories of impulsive buying emphasise the role of personality across the impulsive buying process. Within the impulsive buying literature, there is a specific focus on the role of general impulsivity and the Big-Five personality facets. Accordingly, Rook (1987) suggests that people with spontaneous and immediate traits are more likely to make impulsive purchases. Other research also indicates that general impulsivity is strongly correlated with the impulsive buying tendency (e.g., Wuen, Jones, & Beatty, 1998). Furthermore, the cognitive aspects of the impulsive buying process appear to be strongly related to cost and benefits analyses made by impulsive buyers (e.g., Puri, 1996). Consumer cognitive models of impulsive buying, incorporating impulsiveness, self-control and time-inconsistent preferences, indicate that consumers exhibit short and long-term preferences. The psychological struggle and conflict between the desire to act on an impulsive urge and the desire to resist the impulsive urge is one of the key elements of the impulsive buying process (e.g., Rook & Hoch, 1985).

Short and long-term preferences influence when a consumer focuses on the costs or benefits of their behaviour. Puri (1996) argues that when the benefits of impulsive behaviour are more prominent than the costs, consumers yield to impulsivity. Consumers may also disregard the costs of their short-term focused behaviour (Rook & Hoch, 1985). Furthermore, hedonic or image related benefits can lead a person to succumb to temptation. Puri frames these decisions as consumer chronic values and describes consumers as “hedonics” or “prudents”, rated using a *consumer impulsivity scale* (CIS). In a series of experiments, Puri found that “hedonic” participants were more likely to modify their impulsiveness if known costs were highlighted, or if known benefits were undermined. In uncertain situations “prudents” reacted more strongly to information highlighting the costs. Therefore, the experiment results largely support Puri’s cost and benefit model. However, aside from problems related to the use of undergraduate students, the participants in Puri’s study were also asked to rate their impulsive behaviour in scenarios unrelated to consumption⁷. Consequently, it is unclear how the “hedonic” and “prudent” participants may have reacted in purchasing situations. Furthermore, the participants completed the experiment immediately prior to completing the CIS. As a consequence, it is possible there may have been some form of priming effects (e.g., Wiggs & Martin, 1998) associated with the study design.

Consumer impulsivity may be further influenced by materialism and self-image values. For example, Burroughs (1996) argues that the meanings that objects hold for consumers are matched with the images that consumers’ hold of themselves. Therefore, those who are concerned with self-image might be more likely to engage in impulsive buying if they experience an urge towards an image related product (e.g., Dittmar, Beattie & Friese,

⁷ The participants were exposed to scenarios with the choice of studying versus a concert, dieting versus eating a large meal, and drinking versus not drinking.

1995). Furthermore, Dittmar and Drury (2000) interviewed consumers and found that self-image was more of a concern for women rather than male shoppers.

Strack and Deutsch (2006) build upon consumer impulsivity theories and propose a reflective-impulsive model of human behaviour, which they suggest explains impulsivity and impulsive buying. Within this model, both reflectivity and impulsivity account for decision making; impulsivity is associated with a network processing information automatically and quickly, while reflectivity is associated with a network slowly processing rule-based reasoning. As with other dual process models of decision making, the impulsivity and reflectivity systems interact. Vohs (2006) argues that that self-regulation is the key factor in the reflective system and individual self-control is a critical factor in how a consumer reacts to their impulsivity. Furthermore, there is evidence to suggest that impulsive buying can result from low self-regulatory resources (Vohs & Faber, 2007). Within the impulsivity theories of impulsive buying, the potentially important moderating roles of situational or emotional factors are somewhat diminished. For example, consumers might react to their own impulsivity but also to social factors (e.g., Luo, 2005) and the environment (Beatty & Ferrell, 1998). However, few studies have explored the interaction between impulsivity factors, trait impulsive buying and situational variables during shopping.

While the role of impulsiveness as an impulsive buying antecedent is well known, the information regarding other personality variables is less clear. For example, there is ambiguity concerning the influence of the big-five personality factors. These Big-Five traits (five-factor model or FFM) consist of conscientiousness, neuroticism (emotional stability), extroversion, agreeableness and openness/autonomy (Costa & McRae, 1992; McRae & John, 1992). Within the FFM, the evidence concerning conscientiousness and the impulsive buying tendency suggests a significant negative correlation (e.g., Verplanken & Herabadi, 2001). This relationship is unsurprising given the prudent (Hogan, 1986), constrained

(Tellegen, 1982) and low impulsivity (McCrae & John, 1992) facets of consciousness. The organisation/monitoring aspect of consumer behaviour is frequently emphasised in the impulse buying literature, particularly with reference to how consumers resist their urges (e.g., Baumeister, 2002a & 2002b; Rook & Fisher, 1995). For example, Baumeister (2002b, p.671) states that “consumers who know precisely what they want are probably less likely to indulge in impulsive buying”. Accordingly, Verplanken and Herabadi (2001) report that conscientiousness negatively correlates with the full impulsive buying tendency and the cognitive component. Supporting these findings, more recent research has established a negative signification correlation between conscientiousness and the impulsive buying tendency (Bratko, Butkovic & Bosnjak, 2013; Thompson & Prendergast, 2015; Wong, Tu & Lin, 2010).

Extroversion also appears to be an important antecedent and exhibits a positive significant correlation with trait impulsive buying (Bratko, Butkovic & Bosnjak, 2013; Thompson & Prendergast, 2015; Wong, Tu & Lin, 2010) and with both the cognitive and affective components (Verplanken & Herabadi, 2001). Verplanken and Herabadi (2001) suggest that extraversion and impulsive buying could be related due to impulsive buyers purchasing products as a means of expressing themselves, or symbolise belonging to a group. However, the role of social factors in impulsive buying is somewhat ambiguous, so it is not entirely clear why extroversion should be an important facet of the impulsive buying tendency. One interpretation is that extroverts tend towards shopping with others and find more encouragement for acting against social norms which are a barrier to impulsive behaviour (Rook & Fisher, 1995).

Existing evidence is inconsistent regarding neuroticism and trait impulsive buying. High neuroticism has been reported as a positive indicator of the impulsive buying tendency (Bratko et al, 2013; Thomson & Prendergast, 2015; Wong et al, 2010) but some researchers

have also reported no relationship between neuroticism and trait impulsive buying (Verplanken & Herabadi, 2001). Silvera, Lavack and Kropp (2008) established that the affective component of the impulsive buying tendency correlates with longer term negative emotional states. The implication is that that longer term negative affect can lead a consumer to engage in impulsive behaviour. Research into impulsive buying as a regulatory behaviour supports the role of longer term negative affect (e.g., Fenton-O'Creevy, Furnham, Dibb and Davies, 2012). However, as I discuss later, the implications of these findings are not clear due to the lack of research into how state and trait affect interact. The mixed findings for neuroticism increase the ambiguity concerning impulsive buying and affect.

There are also mixed results for openness and agreeableness correlations with impulsive buying. Only Verplanken and Herabadi (2001) report a significant correlation for openness (autonomy) and impulsive buying. Furthermore, Bratko et al (2013) report the only significant relationship for agreeableness and impulsive buying. It is surprising that openness is not more of a significant indicator of impulsive buying given the relationship between openness and variety seeking, and openness and absorption. Variety seeking and absorption both share similar psychological antecedents with impulsive buying (Sharma, Sivakumaran & Marshall, 2010; Youn & Faber, 2000). However, it is possible that impulsive buying represents a type of loose shopping routine for some consumers, whose usual behaviour is simply to shop without any plans. The facets of agreeableness suggest that lower agreeableness would correlate with lower impulsive buying. For example, those exhibiting a lower agreeable trait may be less likely to be manipulated in social settings (e.g., Costa & McRae, 1992). Low agreeableness is also correlated with self-monitoring, a factor of self-control that is important in resisting impulsive urges (Vohs & Faber, 2007). However, there is little evidence for a significant correlation between impulsive buying and agreeableness

One explanation for the mixed results concerning personality might be the different methods used in the aforementioned studies. In particular, there are sampling issues associated with the studies providing the main supporting evidence for personality (Bratko, Butkovic & Bosnjak, 2013; Thompson & Prendergast, 2015; Verplanken & Herabadi, 2001). For example, there may be cross-cultural effects related to the use of samples from different cultures; Thompson and Prendergast (2015) sampled Hong Kong students, and Bratko, Butkovic & Bosnjak (2013) collected data from twins in Croatia. Cultural effects have been reported to influence the strength of the impulsive buying tendency across different cultures (Kacen & Lee, 2008). However, the use of varied samples does provide increased support for the importance of conscientiousness and extroversion as these two facets are reported as significant variables in the majority of existing research.

There is evidence that the pleasurable nature of impulsive buying attracts consumers who exhibit personality variables related to variety seeking. Variety seeking refers to alternating between usual products, stores and brands for the sake of change and is regarded as a stimulation seeking behaviour (Steenkamp & Baumgartner, 1991). Sharma, Sivakumaran and Marshall (2010) investigated variety seeking and impulsive buying, alongside optimal stimulation level, self-monitoring and consumer impulsiveness. They report that both variety seeking and impulsive buying are related to optimal stimulation level and self-monitoring. Due to the pleasurable aspect of impulsive buying, researchers have also explored its relationship with stress relief as chronic stress can lead to relief behaviours, such as smoking, drugs or alcohol (Sinha, 2008). Youn and Faber (2000) explored the role of stress reaction in impulsive buying through a student sample. Their results indicate that that stress reaction is only moderately related to impulse buying. Youn and Faber's results concerning stress relief are somewhat surprising given the important role of affect in the impulsive buying process. However, the use of a student sample could have affected Youn

and Faber's results, as the different life situations of students and non-students can lead to different forms of stress relief. Furthermore, Youn and Faber also report negative affect as an important cue to impulsive buying, suggesting that stress may have indirectly affected impulsive buying.

2.4.1.c Cultural variables

The majority of research on impulsive buying has been conducted using western consumers primarily based in North America (Amos, Holmes & Keneson, 2013). Consequently, some researchers have considered potential cultural differences in impulsive buying behaviour (Kacen & Lee, 2002; Lee & Kacen, 2008). There is evidence that consumers from individualist cultures exhibit higher trait impulsive buying than consumers from collectivist cultures (Kacen & Lee, 2002). A follow up study by Kacen and Lee (2008) indicates that the individualist participants exhibited a stronger correlation between trait impulsive buying and actual impulsive purchasing. Kacen and Lee argue that collectivist consumers are less likely to act upon their impulsive buying tendency. Kacen and Lee also report that affect was only a significant variable in impulsive buying for the Asian participants, and not the Caucasian participants. However, it is possible that the results reflect the use of self-reported behaviour in different cultures, rather than an underlying difference. For example, the collectivist consumers may have reported that their consumption behaviour aligns with social norms even if their actual behaviour does not. Evidence from other studies also suggests that the psychological antecedents of impulsive buyers is similar across cultures (e.g., Thompson & Prendergast, 2015; Verplanken & Herabadi, 2001).

2.4.2 Trigger/Urges phase

Across the trigger phase, person and context level variables, or cues, interact to produce impulsive urges. These variables interact with underlying dispositional,

demographic and sociocultural antecedents. The majority of research on urges has focused on the influence of individual factors or on the correlations between a small number of variables. The research for the triggers phase is somewhat fragmented given the sheer number of potential variables that can trigger impulsive buying urges (e.g., Amos, Holmes & Keneson, 2013).

2.4.2.a Affect

The hedonistic aspect of impulsive buying has led to a considerable body of research on the affective aspects of the behaviour. Affect encompasses emotion, emotional episodes and moods (Gross, 1998). Emotions are generally described as being shorter term, arising in response to specific objects (Fridja, 1993) and involving changes in subjective experience, behaviour and physiology (Mauss, Bunge & Gross, 2007). While moods are longer term and more diffuse (Gross, 1998), emotions tend to arise and subside within a few seconds, or a few minutes (Sheppes & Gross, 2011). A number of recent studies have highlighted the important role of emotion in financial decision making (Lo & Repin, 2002; Seo & Barrett, 2007) and research suggests that financial traders' emotion regulation techniques impact on their performance (Fenton-O'Creevy et al, 2011). Researchers have also explored how emotions influence general consumer behaviour (e.g., Arnold & Reynolds, 2009; Gardner, 1985; Luce, 1998). For example, Gardner (1985) suggests that mood states influence how consumers respond to service encounters, and shape their subsequent purchase behaviour. The act of consuming to manage emotions, or "emotion regulation consumption", was investigated by Kemp and Kopp (2011). They assigned participants to hypothesised buying conditions designed to elicit different emotions. Kemp and Kopp's results indicate that the participants attempted to down regulate negative emotions and maintain positive emotions through consumption of hedonic goods. These findings highlight the important role of emotion in consumption behaviour.

Weinberg and Gottwald (1982) conducted one of the earliest studies into impulsive buying and affect. They found that impulsive buyers reported more positive emotions and were rated as more emotionalised by third party viewers. However, the researchers set a low bar in terms of how buyers were rated, with any buyer making a purchase on a pop-up stand considered impulsive. Therefore, the participants' trait levels of impulsive buying are unknown. The study also used post-purchase self-reported measures of emotion, which can influence validity. For example, Robinson and Clore (2009) report that emotion is more valid when measured *during* an event, rather than *after*. However, Rook and Gardner's (1993) results also highlight the importance of affect during impulsive buying. Their participants more frequently described positive mood states as cues to encourage impulsive buying, but also discussed the importance of negative mood states, such as when miserable.

Recent evidence into the role of affect indicates that positive emotions are most frequently cited as important cues or triggers for impulsive buying behaviour (e.g., Coley & Burgess, 2003; Park, Kim & Forney, 2006; Youn & Faber, 2000). However, these results are based on recalled affective states reported after the impulsive buying act. In contrast, Beatty and Ferrell (1998) measured actual impulsive purchasing in a shopping centre in order to provide a real-world account of impulsive buying. Beatty and Ferrell report that positive state affect correlated with felt urges to buy. However, a potential limitation of the study is that the participants' affective states were measured following the impulsive behaviour; with the consequence that the participants may have had difficulty identifying their pre-purchase state. Despite this limitation, the results provide an indication that consumers' emotional states influence their impulsive urges. More recent evidence corroborates the important role of emotion as an impulsive buying trigger. Lee and Yi (2008) measured arousal and pleasure during a shopping trip. They report that "arousal", but not "pleasure" was correlated with impulsive purchases and both were correlated with impulsive buying intentions.

Furthermore, “pleasure” was moderated by the impulsive buying tendency. However, the broad category of “arousal” these authors use included both negative and positive emotional states. The results suggest that the category of “arousal” influences impulsive buying urges and purchases, but do not provide information about discrete state emotions.

Herabadi, Verplanken & Van Knippenberg (2009) conducted two studies investigating impulsive buying in Indonesia. The first, which used the typical method of recording affect post-shopping, indicates that impulsive buyers reported more positive emotion and hedonistic considerations than non-impulsive buyers. Their second study involved a more longitudinal approach, in which students were asked to record a three day diary of shopping behaviour and buying considerations. The results indicate that the students frequently reported affective and hedonic considerations. Furthermore, the impulsive buying tendency was significantly correlated with affective response, buying considerations and purchase behaviour. The authors suggest that this may be due to a self-regulation process, in which irrespective of whether purchasing is triggered by positive or negative emotion, the process is pleasurable at the time of purchase. Despite the diary method, the participants were still asked to recall their behaviour after a shopping trip. Consequently, the method may have suffered from the aforementioned issues with measuring recalled rather than current affect. However, the results provide further support for the importance of emotion, and that impulsive buyers themselves describe affective and hedonic impulsive buying considerations.

The strong role of affect in impulsive buying implies that some consumers could use the behaviour as a form of emotion regulation. For example, Youn and Faber (2000) report that participants recorded negative emotions as frequent cues for impulsive buying. Furthermore, Verplanken and Sato (2011) argue that because there is no simple model of impulsive buying antecedents, the behaviour “is part of complex and dynamic psychological

functioning and can be considered as a form of psychological self-regulation” (p.204). They classify two regulation strategies, namely: promotion focused, and prevention focused. Promotion strategies are focused on positive experiences, relate to factors such as seeking pleasure, and are related to personality traits such as extroversion. Prevention strategies are focused on attempts to repair mood, and are related to personality traits such as emotional instability. For example, impulsive buying could be a type of needs-orientated emotion regulation that stems from a need for rewarding hedonic states, e.g., a desire for low levels of negative emotion and high levels of positive emotion (Koole, 2009). Recent research supports the use of impulsive buying as a form of self-regulation (Fenton-O’Creevy, Furnham, Dibb and Davies, 2012). In Fenton-O’Creevy et al’s study of over 109,000 UK participants, the impulsive buying tendency was positively correlated with chronic prevention and promotion focused self-regulation.

Despite the potential for impulsive buying to form a regulatory behaviour, recent evidence (published after the thesis data collection) indicates that impulsive buying does not necessarily improve a negative pre-purchase mood. Ozer and Gultekin (2015) report that pre-purchase mood and purchase satisfaction were significantly correlated with post-purchase mood, but impulsive buying was not. The participants who reported positive moods prior to a purchase also reported higher satisfaction. Accordingly, there are still considerable ambiguities regarding the use of impulsive buying as a form of regulation. In particular, the evidence concerning longer term negative affect is unclear and there is little research linking trait and state affect. Researchers have also speculated how regulatory impulsive buying may lead to a pattern of behaviour (Xiao & Nicolson, 2011), but it is unclear how affect may interact with other variables to influence this relationship.

2.4.2.b Social influence

Current evidence indicates that social factors influence impulsive buying urges as the presence of other people moderates the impulsive buying tendency (e.g., Luo, 2005). The importance of social interaction and socialising in general consumer behaviour is well recognised (e.g., Tauber, 1972; Griffith, 2003). For example, susceptibility to personal influence is known to affect purchasing choices (Bearden, Netemeyer & Teel, 1989). Dholakia (2000) also reports a marginal effect for interacting with family members as a shopping motive, with a stronger correlation for men than women. Nicholls et al (2002) found that shoppers in a mall were more likely to make a purchase when shopping with a companion. Furthermore, Evans, Christiansen and Gill (1999) describe shopping as a social behaviour and suggest that interacting with others can be a primary motivation for shopping.

Rook and Fisher (1995) argue that social normative evaluations are a crucial factor in impulsive buying due to the potentially negative norms associated with the behaviour. Therefore, positive social encouragement for an impulsive purchase can lead a consumer to indulge their urge. In the general consumer literature, research indicates that social norms can influence consumer decision making and consumers may be especially motivated to comply with family and close friend's norms. Supporting the importance of social influence, Amos, Holmes and Keneson's (2013) meta-analysis of the impulsive buying literature (published during the thesis data collection) indicates that positive and negative social variables are significant influences on the impulsive buying tendency. Amos, Holmes and Keneson also report that positive social influence has the second greatest effect on impulsive buying, after the impulsive buying tendency. Their meta-analysis further indicates that negative social influence is not as strong a factor as positive influence. Accordingly, consumers who exhibit a strong impulsive buying tendency may be more likely to act on encouragement than they are to react to discouragement.

The role of social influence appears to be affected by the relationship of the companion to the impulsive shopper. Luo (2005) investigated the role of peer or family groups in impulsive buying using a student sample. Compared with a control group, the presence of a peer group increased the number of impulsive urges and increased the act of impulsive purchasing. Luo reports that the presence of family groups resulted in fewer impulsive urges. Furthermore, the cohesiveness of the group relationships influenced the strength of these effects. Using the interpersonal influence scale devised by Bearden et al (1989), Luo measured the susceptibility of participants to impersonal influence. Susceptibility to interpersonal influence positively correlated with impulsive urges and with impulsive purchases for both the cohesive and non-cohesive peer groups. Luo's results thus indicate that when consumers shop with peer groups the views and purchases of shopping companions are particularly important. However, the use of student sampling in Luo's study is a particular limitation as the student participants may have had different familial relationships compared with non-students. For example, the students may have relied on monetary support from parents and attempted to demonstrate a careful approach to spending around family. Despite the importance of social influence, there are still few studies which have comprehensively explored how underlying social factors affect impulsive buying. In particular, there is a lack of research exploring how social factors moderate variables through the different phases of the impulsive buying process.

2.4.2.c Environmental/situational/product factors

The shopping environment plays a significant role during the trigger phase of the impulsive buying process. Environmental or situational factors interact with antecedent level variables to influence behaviour, e.g., men and women experience different impulsive urges for some product categories (e.g., Dittmar et al, 2005). Motives for shopping also differ

depending on the shopping context (Buttle, 1992) and this can affect the way a consumer is influenced by the environment. Therefore, the environment can interact with contextual factors differently if a consumer is shopping for clothes as opposed to, say, electronics.

Numerous visual and sensory cues exist in the shopping environment and a person's propensity to be affected by these cues can influence their impulsive urges. Youn and Faber (2000) argue that absorption is a key factor in understanding the effect of environmental cues. Absorption has been described as the tendency to become emotionally responsive to stimuli and those high in absorption are readily captured by stimuli they find entrancing (Tellegen & Waller, 2008). Those high in absorption are also reported to be more susceptible to environmental cues, such as product advertisements or the layout of stores (Youn & Faber, 2000). There also appear to be environmental factors related to the sensory shopping experience. Peck and Childers (2006) report that consumers who exhibit a preference for an autotelic need for touch (i.e., touch as enjoyment or sensory orientated) were more likely to engage in impulsive buying of fruit. Peck and Childers' results also show that those with high and low need for touch were more likely to impulsively buy fruit when a sign encouraged touching. Their results suggest that some consumers may react to the environment through a desire to handle products. However, it is not clear whether this finding extends to non-food product types, such as clothes. Furthermore, the participants may have been rationally responding to greater information when able to touch the fruit, e.g., ripeness.

Consumer perceptions of available time and money affect their shopping experience, increase urges and are positively correlated with positive mood (Beatty & Ferrell, 1998). Beatty and Ferrell's results also indicate that participant perception of money had a significant positive impact on impulsive purchasing. The results of Beatty and Ferrell's study suggest that impulsive buying urges can occur due to an interaction between a consumer's

positive mood state and their perception of the shopping experience. Hoch and Loewenstein (1991) also suggest that the longer a person is shopping, the less they experience disappointment related to not making a purchase. Therefore, temporal proximity appears to be an important determinant for impulsive buying. There may also be an important cognitive process that takes place between a felt urge and purchase, in which a consumer considers costs and benefits (e.g., Puri, 1996). For example, if a consumer's perception of available money is negative they may be less likely to make an impulsive purchase (e.g., Beatty & Ferrell, 1998; Lowenstein, 1990). Emotion also appears to be important in this context, as environmental and situational cues have the potential to alter mood and lead to impulsive urges (e.g., Youn & Faber, 2000). However, there has been relatively little research into the interaction between environmental factors and mood beyond that of Beatty and Ferrell (1998). As a result, there is ambiguity around how emotion, environmental and situational factors interact. In particular, in relation to whether environmental factors can moderate or mediate the impact of affect, or whether social groups can affect environmental cues.

Shopping environment also appears to be a factor in online impulsive buying (e.g., Jeffrey and Hodge, 2007). Online impulsive buying has received much less attention than in-store behaviour (Amos, Holmes & Keneson, 2013). However, researchers in the last 20 years have noted that the relative anonymity of shopping while using the internet can encourage impulsive buying (Koski, 2004; Rook & Fisher, 1995). The majority of research has focused on how the online shopping environment leads to impulsive urges, or purchasing. For example, early research indicates that website characteristics, such as layouts or the use of pictures influence impulsive buying urges (e.g., Adelaar et al, 2003; Jeffrey & Hodge, 2007; Madhavaram and Lavarie, 2004). However, the rapid changes in technology over the last 20 years has enabled retailers to adopt increasingly complex websites. The U.K office of national statistics report that in 2014, over 91% of households

use fixed broadband internet connections. Accordingly, consumers have access to fast internet connections capable of loading data intensive content such as product videos⁸. These rapid technological changes impact on the validity of early research into internet based impulsive buying.

More recent research into online impulsive buying reports mixed results regarding the importance of the online environment. There is evidence that website quality moderates the relationship between trait impulsive buying and the impulsive buying urge (Wells, Parboteeah & Valacich, 2011). However, the use of a researcher created website in this study limits the external validity of the results. Consequently, it is important to review research into online impulsive buying which has used a real-world setting. Verhagen and Dolen (2011) collected data from online shoppers following an online transaction. The participants were asked about the impact of online store beliefs on urge to buy, website communication, ease of use, and merchandise attractiveness. Their results indicate that none of the store beliefs directly correlated with urge to buy. However, a structural model with positive affect presented the best fit for their data. This suggests that affect may have moderated the relationship between the website beliefs and purchase.

2.4.3 *Buying phase*

The individual actions or processes that influence whether a consumer succumbs to or resists their impulsive urges relate to the act of buying phase. Antecedents and triggers interact with factors such as self-regulatory resources to determine if a consumer makes an impulsive purchase. Whether a consumer resists the impulsive urge or not could be a result of a struggle between their willpower to resist an urge and their desire to make a purchase (e.g., Dittmar & Drury, 2000; Hoch & Loewenstein, 1991). In other words, consumers

⁸ A number of retailers including Topshop/Topman embed videos onto product homepages allowing consumers to see a model exhibiting the item.

choose between the short and long-term consequences of their behaviour, with the outcome influenced by various factors. Ainslie and Haslam (1992) argue that people experience successive preferences which give rise to long or short-term interests. These interests may dominate over other interests at any given time, but as the situation is ongoing a dominant interest may become subordinate. Consequently, consumers can find short-term goals of enjoyment can undermine their longer term interests of saving. In some cases, self-control interacts with consumer cost-benefit analysis of an impulsive choice (Puri, 1996); while in others, consumers who rely on low-effortful affective decision making systems may not resist their urge.

2.4.3.a Social influence

Rook and Fisher (1995) argue that the negative social norms associated with impulsive buying, coupled with the impulsive buying tendency, affect the likelihood of consumers engaging in impulsive purchasing. Impulsive buying is associated with feelings of guilt and social disapproval (Rook, 1987). As a consequence, some consumers resist their urges in order to avoid such negative feelings. In their studies of impulsive buying, Rook and Fisher report that normative evaluations moderated the relationship between the impulsive buying tendency and impulsive purchasing. Accordingly, consumers who made positive normative purchase evaluations were more likely to make an impulsive purchase. However, in their study of real-world purchasing behaviour Rook and Fisher required participants to report the normative evaluation following a purchase. As a consequence the participants were, in effect, asked to judge their own behaviour. Therefore, the negative norms associated with impulsive buying may have affected their response to the researcher's questions.

Normative evaluations may be affected by consumers' susceptibility to interpersonal influence. For example, consumers who are more susceptible to influence might be more

likely to consider their purchases from the perspective of others (e.g., Luo, 2005). Despite the negative social norms associated with some forms of impulsive buying, many consumers still engage in the behaviour (Hausman, 2000). One explanation is that the majority of impulsive buying only leads to minor infractions upon social norms (Rook & Fisher, 1995). Accordingly, consumers might only react to social norms where they are sufficiently negative. There is also evidence that normative evaluations are a factor in impulsive buying in non-western cultures. Lee and Kacen (2008) report increased post-purchase satisfaction for Asian students who shopped with other people and were highly susceptible to influence. Furthermore, Kwak, Zinkhan, Delorme and Larsen (2006) report that impulsive buying was moderated by the normative evaluations of their South Korean participants. However, Rook and Fisher (1995) suggest that the social visibility of the impulsive purchase is a factor in how consumers behave. Therefore, it is possible that the participants in Kacen and Lee, and Kwak et al studies responded in line with social norms rather than with their actual purchasing behaviour. The potential for social norms to influence participant responses is a problem associated with research on impulsive buying social norms. Accordingly, there is often a lack of clarity about how the social norms are affecting participant questionnaire responses as well as their actual behaviour.

2.4.3.b Self-control

Self-control consists of three components; standards/goals, self-monitoring and the capacity to change (Baumeister, 2002b; Vohs & Faber, 2007). As discussed in the *antecedents* phase, impulsive buying may be the result of a conflict between short-term desire and self-control. If the desire outweighs the self-control, then a consumer gives into their impulsive urge (Baumeister, 2002b; Baumeister, Sparks, Stillman & Vohs, 2008). Hoch and Loewenstein (1991) suggest that self-control is a conflict between desire and willpower.

Thaler and Shefrin (1981) refer to this conflict as occurring between a short-term myopic do-er and a long-term farsighted planner. Hoch and Loewenstein (1991) further suggest that time-inconsistency in choices leads to decisions that would not be made if considered in terms of the long-term goals.

As impulsive urges are strongly related to emotion (e.g., Youn & Faber, 2000), emotional distress can tip the balance in favour of a purchase (Baumeister, 2002b). Therefore, consumers struggle to resist their urge if they experience a particular mood state. Some evidence indicates that consumers who were told they could change their mood were more easily able to regulate their behaviour (Tice et al, 2001). The implication of Tice et al's results is that there is may be an important cognitive role in how participants respond to impulsive urges that stem from emotion. Furthermore, the affective component of decision making guides decisions (Slovic, 2006) and consumers may rely on system 1 for everyday decisions (Stanovich & West, 2003). Consumers could unconsciously rely on emotions to make some purchase choices during the buying phase. Furthermore, emotional distress may lead consumers to favour the short term in some situations.

During the latter part of their shopping trip, consumers can find their limited regulatory resources are dwindling (Baumeister, 2002a; Vohs, 2006). For example, Vohs and Faber (2007) report that consumers were more willing to pay higher prices towards the end of a shopping task, and self-regulatory resource depletion predicted spending. However, Vohs and Faber relied on predicted or recalled behaviour for their research and the data may not necessarily reflect how self-control influences behaviour in a real-world setting. Furthermore, there is very little research relating to how self-control factors interact with other variables. For example, Amos, Holmes and Keneson's (2013) analysis of impulsive buying research indicates that positive social influence is one of the strongest factors in influencing the impulsive buying tendency. Despite the importance of social factors they

have been largely ignored as influences on consumer self-control; yet consumers may find it more difficult to control their impulsive urges if they are particularly susceptible to interpersonal influence. There might also be social aspects to self-control if consumers are given positive social encouragement (e.g., Rook & Fisher, 1995).

2.4.4 Outcomes of impulsive buying phase

The outcomes phase relates to the post-purchase effects of impulsive buying, such as psychological or financial outcomes. This phase has received relatively little attention, despite the potential importance for future behaviours. For example, Xiao and Nicholson (2011) suggest that positive or negative outcomes can affect the likelihood of further impulsive buying. There is emerging evidence from the literature that impulsive buying can lead to severe negative cognitive and affective consequences (e.g., Fenton-O'Creevy, et al, 2012). However, researchers have largely focused on exploring either pre-purchase or during-purchase variables. As a result, it is not clear whether outcomes differ depending on the pre-purchase antecedents, such as differing mood states, or how antecedents affect outcomes.

Bayley and Nancarrow (1998) explored impulsive buying outcomes using qualitative techniques. Their participants reported guilt and regret based on the financial aspects of impulsive buying behaviour. Impulsive buying was also seen as a contrast to non-impulsive purchasing, which Bayley and Nancarrow refer to as a rational-guilt model of impulse buying. In order to align behaviour with a kind of rational shopper and to alleviate guilt, the participants discussed various post-purchase strategies. These involved such behaviours as “over buying” where one item is taken back while others are kept, or hiding the items. Another avoidance or coping strategy used by compulsive buyers occurs when purchases are hidden (e.g., Frost et al, 1998) or not actually used (e.g., McElroy et al, 1994). The rational-guilt model proposed by Bayley and Nancarrow indicates that consumers experience guilt

due to societal norms around consumption behaviours. However, they still engage in “non-rational” behaviours suggesting that the pleasurable aspects of impulsive buying outweigh any anticipation of post-purchase regret.

One of the difficulties in exploring post-impulsive buying outcomes is establishing if negative outcomes are associated with the behaviour or the negative social norms (e.g., Rook & Fisher, 1995). The relative anonymity of quantitative approaches may allow consumers to speak more freely about impulsive behaviour. Therefore, it is useful to compare the results of Bayley and Nancarrow (1998) with a more recent quantitative study. Yi and Baumgartner (2011) explored guilt and shame and the use of post-impulsive buying coping strategies, and developed a scale of “coping with impulsive buying” to explore the latter. The intensity of experienced guilt by the participants correlated with experienced depressive symptoms. Furthermore, shame was associated with mental disengagement, blaming others, resignation and coping strategies. More recent evidence from the large scale U.K study (e.g., Fenton-O'Creevy, et al, 2012) supports the potential for impulsive buying to have problematic outcomes. In particular, the study found that impulsive buyers were three times more likely to be declared bankrupt.

2.5 The knowledge gap

The research I have presented so far highlights the important role of multiple variables during the impulsive buying process. However, I have also discussed a number of ambiguities concerning social influence and affective influence in particular. This uncertainty largely stems from the number of variables which have been reported to correlate with the impulsive buying tendency, or lead to impulsive urges/purchases. There is relatively little evidence concerning the interaction between personal and contextual, or situational factors. Where moderating variables have been explored, the research has focused on how variables moderate the impulsive buying tendency and impulsive purchasing relationship

(e.g., Luo, 2005). Accordingly, there have been calls within the literature for a renewed focus on moderating factors which interact across the impulsive buying process and moderate the influence of other variables. For example, Xiao & Nicholson (2013) suggest that future research should consider potential moderating factors, such as how the: “social context represented by the presence of a friend or personal shopping assistant may moderate relationships among antecedents, triggers and buying acts” (p.350). Furthering understanding of moderating variables may also help to clear up some of the inconsistencies in current research; for example, related to the big-five personality factors.

The lack of research into how social and emotional factors moderate the impulsive buying process has a number of significant academic implications. If the influence of variables, such as environmental, are related to or affected by social or emotional factors then research may currently misrepresent the impulsive buying process. It is also difficult to model the impulsive buying process without speculation as to how variables interact. Consequently, researchers could have developed theories based on incomplete knowledge. For example, Amos, Holmes & Keneson (2013) recently report 251⁹ significant effects within the impulsive buying literature. There are likely to be a considerable number of important interactions between these effects that have not yet been explored. By exploring the role of moderating variables, we can identify underlying factors that could influence the role of many other variables. As an example to illustrate the importance of underlying influence, the acknowledgement of trait impulsive buying has led to numerous important breakthroughs within the literature (e.g., Rook & Fisher, 1995; Verplanken & Herabadi, 2001).

⁹ The authors report 345 effects from 63 published and unpublished research papers

Given the importance of impulsive buying for both retailers and consumers, the practical significance of exploring moderating variables is considerable. As I discussed earlier, a number of researchers have made recommendations to retailers based on their research (e.g., Bayley and Nancarrow, 1998). If there are underlying moderating influences this has clear practical significance for retailers. Not least to identify how impulsive buyers react differently to personal impulsive buying cues in different situations. However, the potential negative consequences of the behaviour (e.g., Fenton-O'Creevy, Furnham, Dibb & Davies, 2012) also suggests that there may be a remit for retailers to acknowledge these potentially severe outcomes. Researchers will be better able to articulate the potential for long-term consequences if they can more accurately model the underlying behaviour. At a more basic, but no less important, level increasing knowledge of the underlying processes and interactions will enable researchers to identify the point at which impulsive buying can become a problem for consumers. For example, whether social factors are a particular cause of negative outcomes or repeated behaviours (e.g., Yi & Baumgartner, 2011).

2.5.1 The unexplored moderating influence of social influence

The potential importance of social influence in impulsive buying is well established. In particular, there have been a number of studies which have explored the role of positive and negative social influence (Amos, Holmes & Keneson, 2013). Current evidence indicates that socialising can be a primary motivation for shopping (e.g., Bäckström, 2006; Dholakia, 2000). Furthermore, peer or family influence can affect impulsive urges (e.g., Luo, 2005) and social norms can lead to urges being resisted or acted upon (e.g., Rook & Fisher, 1995) or influence post purchase satisfaction (e.g., Lee & Kacen, 2008). Within the wider field of consumer behaviour there is also evidence of the important role that interpersonal influence has in consumption. Kang et al (2011) report that fashion choices are related to susceptibility to interpersonal influence and developed a scale to measure interpersonal factors associated with shopping. There is also evidence from the impulsive buying literature that susceptibility

to interpersonal influence is a factor for impulsive buyers (Luo, 2005; Silvera, Lavack & Kropp, 2008). Despite the importance of social influence, and positive social influence in particular, relatively little is known about how social factors interact with or moderate other impulsive buying variables. Where the moderating influence of social factors has been examined, the research has focused on how they moderate the impulsive buying tendency (e.g., Luo, 2005). In their meta-analysis of the impulsive buying literature, Amos, Holmes and Keneson (2013) report that current research into social factors and impulsive buying relates to the encouragement/discouragement aspect of social behaviour. Accordingly, little is known about how the social situation moderates or interacts with variables such as enjoyment, affect or personality during the impulsive buying process. Furthermore, the use of student sampling in one of the most well cited papers exploring social influence (Luo, 2005) limits the generalisability of these findings.

I have identified aspects of impulsive buying where currently unidentified social variables may interact with other variables to moderate the impulsive buying behaviour. The moderating influence of social factors presents at each of the four phases of the impulsive buying process:

- *Firstly:* Personality antecedents may interact with the social situation to influence a consumer's impulsive buying urges or buying.
- *Secondly:* Consumers could exhibit preferences towards going shopping alone or with others. A consumer's impulsive urges might then be affected by their enjoyment of social or non-social forms of shopping.
- *Thirdly:* A consumer's impulsive buying urges could be moderated by an interaction between the social setting and affect. For example, a consumer shopping alone could experience different affective states to when they shop with others

- *Fourthly:* During the buying phase there might be aspects of social rationality in social forms of impulsive buying. Consumers may buy to maintain or promote social relationships with friends or family
- *Finally:* Post-impulsive buying outcomes could be affected by an interaction between the social setting, purchase satisfaction and pre-purchase affective state.

The evidence relating to personality and impulsive buying suggests there is an important role for social factors beyond current understanding. For example, extroversion is a particularly strong indicator of trait impulsive buying (e.g., Thompson & Prendergast, 2015; Verplanken & Herabadi, 2001). Extraversion is exhibited by consumers who tend to enjoy being in social environments, while introverts tend to enjoy time alone (e.g., Costa & McCrae, 1992; McCrae & John, 1992). Therefore, a consumer's personality could exert a different influence when shopping alone or shopping with other people. For example, Pirog and Roberts (2007) report that introverted students had higher credit card balances than extroverted students. They argue that introverts may be more likely to use purchasing as a form of excitement, whereas extroverts create excitement through socialising. Consequently, the social situation might moderate the relationship between trait impulsive buying and impulsive behaviour differently for extroverts or introverts.

Consumers may also differ in the extent to which they shop socially or alone and they could exhibit different patterns of behaviour dependent on who they shop with. This change in behaviour depending on circumstance might further interact with situational affect. For example, Wu and Foscht (2012) explored the role of loneliness in impulsive buying and found that a feeling of isolation is an important factor. Wu and Foscht's results indicate that impulsive buying might act as a form of regulation during loneliness for some consumers. Some consumers could be less impulsive with others if their impulsive buying is associated with particular mood states, or could make an impulse purchase while alone due to loneliness. The relationship between social setting and mood could further interact

with the impulsive buying tendency, i.e., some consumers with a low tendency could still engage in impulsive buying if they experience a negative mood state. Consequently, the social situation could moderate the impulsive buying tendency beyond the previously established “positive encouragement” effect (e.g., Rook & Fisher, 1995). For example, there is evidence that consumers behave differently around friends or family (e.g., Luo, 2005). Furthermore, consumers who are susceptible to interpersonal influence are more likely to exhibit higher trait impulsive buying (Silvera, Lavack & Kropp, 2008). Consumers who are susceptible to interpersonal influence might, therefore, behave differently when shopping alone, or experience impulsive buying urges differently when alone. The difference in behaviour amongst social groups could also apply to non-social shopping. The implication being that research on impulsive buying will miss potentially important interactions if the social situation is ignored.

The relationship between social rationality and group impulsive buying has been largely ignored within the literature. Existing research on the role of positive social influence has been largely confined to considering social norms (e.g., Rook & Fisher, 1995). However, social rationality may also be a factor in group impulsive buying. Using social rationality as a framework to understand some forms of impulsive buying could explain why a consumer exhibiting a low impulsive buying tendency is impulsive when with others. A social rationality theory of impulsive buying suggests that fostering social relationships can be one goal of shopping when with other people (Gigerenzer, 2000). The socialising aspect could be also related to interpersonal influence, where consumers opt to buy similar products to friends in order to mirror behaviour. For example, an item on the *susceptibility to interpersonal scale* asks consumers to rate: “If I want to be like someone...” (Bearden, Netemeyer & Teel, 1989. p.487).

Existing evidence concerning social factors suggests that they might also influence post-purchase satisfaction (Lee & Kacen, 2008). The recent study by Ozer & Gultekin (2015) indicates that purchase satisfaction is a significant indicator of post-purchase affect. Therefore, the results imply that purchase satisfaction can play a crucial role in the success of impulsive buying for regulating mood. If social factors moderate satisfaction in the manner that Lee and Kacen (2008) suggest, they in turn may moderate regulatory forms of impulsive buying. Yet, current knowledge of impulsive buying does not adequately explain how social factors moderate purchase satisfaction or if they interact with post-purchase affect.

2.5.2 The unexplored influence of affect

As with the research concerning social influence, research into affective antecedents of impulsive buying has largely focused on direct or mediating effects. There is a great deal of evidence to suggest that positive and negative affect lead to impulsive urges (e.g., Beatty & Ferrell, 1998; Coley & Burgess, 2003), or influence a consumer's self-control (e.g., Baumeister, 2001b). There is also increasing evidence that impulsive buying is used as form of promotion or prevention-focused regulation (Fenton-O'Creevy, Furnham, Dibb & Davies, 2012). Yet, relatively little is known about how different variables interact with affect during regulatory impulsive buying. Accordingly, I have identified where research is lacking in understanding of affect. I have also identified the potential for affect to interact with or moderate other impulsive buying variables, mainly during the urges or buying phases of the impulsive buying process.

- *Firstly:* Affect may interact with situational variables which influence enjoyment of the shopping experience. For example, consumers might experience more enjoyment and associated positive affect if they perceive they have more time to browse or if they are shopping with friends.

- *Secondly*: There is considerable ambiguity concerning the influence of positive and negative affect during the urges and buying phases of the impulsive buying process. Alternative research approaches to those currently used could enable a more thorough understanding of how positive and negative affect interact.
- *Finally*: State and trait affect are likely to interact to moderate impulsive urges and buying processes. Yet, current research has focused on either state or trait affect and it is largely unknown how they interact.

Beatty and Ferrell (1998) report significant positive correlations between shopping enjoyment and positive affect, and in-store browsing and positive affect. Therefore, a consumer engaging in promotion-focused regulation may impulsively buy to retain their positive mood stemming from both enjoyment and browsing time. Situational factors could indirectly lead to promotion-focused regulation if they increase positive affect. For example, salesperson interaction (e.g., Park & Lennon, 2006) and sales-promotions (Liao, Shen & Chu, 2009) have been reported as environmental influences. If these factors improve a consumer's mood they may lead to promotion-focused impulsive buying. There could also be an interaction between social factors and enjoyment that influences how consumers experience affect. For example, if some consumers enjoy shopping with other people they may experience more enjoyment and positive affect. As a result, these consumers could tend to associate impulsive buying urges with positive emotions stemming from the social situation.

There are also ambiguities in the literature relating to the exact influence of positive and negative affect during the impulsive buying process. For example, Beatty and Ferrell (1998) report that negative affect is not significantly correlated with impulsive urges. However, Youn and Faber (2000) report negative emotions as a cue for impulsive buying. Amos, Holmes and Keneson (2013) also find conflicting results for the role of positive and negative affect in their meta-analysis of impulsive buying, and conclude that more research

into affect and impulsive buying is needed. The typical methods used in impulsive buying research may explain some of the discrepancies concerning the role of affect. Since most researchers have collected affective data after the impulsive purchase has taken place, it is difficult to establish if the affective response reported by the participants is an outcome or an antecedent of the purchase. In order to fully explore the moderating effects of affect, alternative methods to measure affect post-purchase must be considered. Qualitative methods, for example, are an underused tool within the impulsive buying field, which when applied have resulted in useful information (e.g., Dittmar & Drury, 2000; Hausman, 2000). A qualitative approach to exploring affect and impulsive buying may allow a more in-depth study of how emotion can impact on impulsive buying.

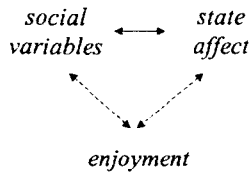
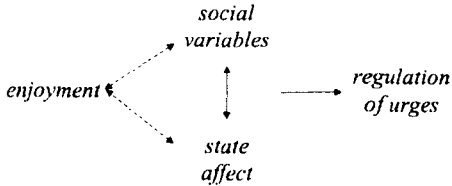
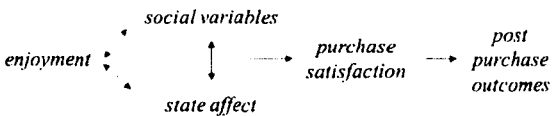
The inconsistencies in the literature extend to knowledge of how state and trait affect interact during the impulsive buying process. Current research indicates that the impulsive buying tendency correlates with trait negative affect (Silvera, Lavack & Kropp, 2007) and neuroticism (Bratko et al, 2013; Thomson & Prendergast, 2015). This suggests that long term negative affect can lead to increased levels of impulsive buying, yet current research shows that positive state affect exerts the greater influence (Amos, Holmes & Keneson, 2013). Consequently, there is an unexplored interaction between a consumer's longer term disposition and their shorter term emotional responses that could lead to impulsive buying. The interaction between state and trait affect is particularly important when considering impulsive buying as a regulatory process. Recent preliminary evidence suggests that post-purchase mood is influenced by pre-purchase mood and purchase satisfaction, but not impulsive buying itself (Ozer & Gultekin, 2015). Ozer and Gultekin's results suggest that impulsive buying may be more successful at promoting positive moods than it is at preventing negative moods. Furthermore, longer term repeated impulsive buying might result from failed attempts to prevent negative moods. Yet, this does not explain the stronger

role of positive affect (e.g., Beatty & Ferrell, 1998) during impulsive purchasing. There remains considerable ambiguity regarding the longer term negative components of the impulsive buying tendency and the shorter term positive components of the impulsive purchasing process.

2.5.3 The potential interaction between moderating variables

Due to the current focus in impulsive buying studies on mediating rather than moderating factors, there is a lack of research into the interaction between variables. Existing research offers an often fragmented view of impulsive buying where many individual variables are reported as antecedents. Accordingly, it is not entirely clear how individual person or contextual variables are moderated by other personal or contextual factors. The sheer number of potential antecedents of impulsive buying may explain the lack of research into interactions. In their impulsive buying meta-analysis, Amos, Holmes and Keneson (2013) report 345 effects across 17 independent variables. Within these 17 variables are many other facets, such as browsing or planned versus unplanned behaviours. As a consequence, there could be hundreds of variables which act on consumers to influence impulsive buying urges. However, if we consider the underlying influences on impulsive buying, there are common factors which are likely to interact with each other. Specifically, social situation or influence, affective influence and the impulsive buying tendency are all important constructs in the impulsive buying process. Furthermore, these factors are present during the entire impulsive buying process. It might be useful to consider the interactions amongst these variables in order to build upon the foundation of existing knowledge. In table 2.1, column one I have proposed three hypothesised relationships between social, affect, enjoyment and outcome variables. In the first relationship, I propose that social and affective factors interact with each other, and also interact with enjoyment to influence a consumer's impulsive behaviour.

Table 2.1: Potential interaction between variables

Hypothesised relationships	Interaction
 <pre> graph TD SV[social variables] <--> SA[state affect] SV -.-> E[enjoyment] SA -.-> E </pre>	<ul style="list-style-type: none"> • Amos, Holmes and Keneson (2013) suggest that there may be a compounding influence of peer influence and accompanying moods for impulsive buying behaviour • The social situation could moderate the influence of affect whilst shopping, and in turn may moderate the influence of the impulsive buying tendency. • Some consumers may find themselves experiencing particular moods which are linked with the social nature of the shopping trip. • Enjoyment and social variables, and enjoyment and affect may also interact, which in turn affects the consumer's experience of the shopping trip. For example, a consumer may enjoy shopping with others which leads to a positive mood. • There may also be a compounding effect of social encouragement during mood changes, as social companions may recognise low moods in others and encourage "retail therapy".
 <pre> graph LR E[enjoyment] --> SV[social variables] E --> SA[state affect] SV <--> SA SV --> RU[regulation of urges] SA --> RU </pre>	<ul style="list-style-type: none"> • Social and emotional factors may interact to affect a consumer's regulation of their impulsive urges. • Self-control is currently emphasised (e.g., Strack & Deutsch, 2006) in terms of controlling consumer impulsivity • Current knowledge also suggests group norms (e.g., Rook & Fisher, 1995) are a factor in consumers resisting their urges • Social or emotional factors may further moderate the regulation process through the enjoyment of shopping, rather than group norms • Hedonism is a key component of the impulsive buying process (Hausman, 2000); therefore, enjoyment, or lack hereof, in different social contexts may moderate the impulsive buying tendency.
 <pre> graph LR E[enjoyment] <--> SV[social variables] E <--> SA[state affect] SV <--> SA SV --> PS[purchase satisfaction] SA --> PS PS --> PO[post purchase outcomes] </pre>	<ul style="list-style-type: none"> • Currently there is relatively little knowledge relating to how outcomes influence future impulsive behaviour; yet, there may be an interaction between enjoyment, social variables and affect, which then influences purchase satisfaction and impulsive buying outcomes • Firstly, pre-purchase negative affect may lead to lower purchase satisfaction, which can influence post-purchase affect (Ozer & Gultekin, 2015). • Secondly, susceptibility to interpersonal influence may affect post-purchase satisfaction for some consumers (Kacen & Lee, 2008). • Finally, some consumers who experience negative impulsive buying outcomes blame companions for their behaviour (Yi & Baumgartner, 2011). • Given the above, there appears to be the potential for a social, affect, and satisfaction interaction which can influence post-purchase affect and the likelihood of further impulsive behaviours.

In the second relationship, I suggest that a three way interaction between social factors, affective factors, and enjoyment could influence a consumer's response to an impulsive urge. In the third relationship, I propose that a three way interaction between social variables, affect and enjoyment could influence a consumer's satisfaction with an impulsive purchase; which can then influence post-purchase outcomes. In column two, I have described the proposed interactions in more detail.

2.5.4 *Research question*

Current research indicates that there is an important role of person and contextual level antecedents in the impulsive buying process (e.g., Puri, 1996; Thomson & Prendergast, 2015; Verplanken & Herabadi, 2001; Youn & Faber, 2000). Furthermore, the identification of the impulsive buying tendency (e.g., Rook & Fisher, 1995) indicates that consumers exhibit a stable trait towards being impulsive. Identifying a trait form of impulsive buying has furthered knowledge of how personality interacts with environment level cues and emotion to produce impulsive urges (e.g., Beatty & Ferrell, 1998). However, there has been relatively little attention directed towards moderating influences during the antecedents, urges, and purchasing phases of the impulsive buying process (Xiao & Nicholson, 2013). Our understanding of how and why impulsive buying occurs is limited without further consideration of these moderators. Importantly, moderating variables might influence the strength of the relationship between the impulsive buying tendency and impulsive purchasing. However, as I have discussed, the social situation is likely to play a more prominent role. For example, social factors could moderate how a consumer responds to emotion or moods.

Social factors and moods may also interact to influence the type of self-regulatory impulsive buying described by various researchers (e.g., Baumeister, 2002b; Fenton-O'Creevy, Furnham, Dibb & Davies, 2012). Emotion has also been widely cited as a key

factor in impulsive urges and purchases (e.g., Youn & Faber, 2000). We know that both positive and negative emotions, and moods, can lead to impulsive urges (Beatty & Ferrell, 1998), but that there might be an important role of other person or contextual cues in this relationship. Therefore, emotion as a moderating, rather than a mediating, factor is less well understood. Research into the role of social and emotional moderating factors has significance from both academic and practical perspectives:

Academic implications

- Underlying social factors may influence other variables or the impulsive buying tendency during the impulsive buying process; for example, a consumer may react differently to the environment when shopping alone or shopping with others. Consequently, there could be variables that influence behaviour differently depending on the social situation.
- There are likely to be interactions between independent variables acting on the impulsive buying process which have been so far unexplored. For example, there may be a relationship between the social setting and personality which influences impulsive urges.
- Recognising potential moderating variables will help with modelling the impulsive buying process and to clear up ambiguities present in the literature. For example, the inconsistent results related to personality may be due to social or affective variables influencing underlying behaviour. There might be correlations between personality facets and the impulsive buying that are affected by the social situation.

Practical implications

- Retailers will benefit from increased knowledge of underlying impulsive buying factors. For example, retailers may be able to market certain forms of consumption towards different personality types
- A better understanding of how underlying factors moderate the impulsive buying process will be beneficial for identifying consumers whose impulsive behaviour is causing problems.

There are also a number of limitations associated with the methods of existing impulsive buying research. For example, there is a reliance on undergraduate student samples, the results of which may not generalise to non-student samples (e.g., Peterson, 2001) leading to external validity issues in many existing impulsive buying studies. Research into social factors (e.g., Luo, 2005), might need to be revisited using more representative samples. Furthermore, there is a lack of qualitative exploration, which is surprising given the potential significance of the behaviour for impulsive buyers (e.g., Fenton-O'Creevy, et al, 2012). Qualitative approaches to research enable a rich account of behaviour to be developed with the people who have first-hand experience. Accordingly, I considered that the inductive approach to theory enabled by qualitative research was an appropriate direction for the first stage of the project. The qualitative stage was particularly beneficial given the exact moderating influence of the social and emotional factors were largely unknown. Accordingly, the research question reflects the exploratory nature of the project and there was no hypothesis for the qualitative stage.

How do impulsive buyers understand the social and emotional influences on their impulsive buying behaviour?

2.6 Summary

The literature review indicated that the impulsive buying process consists of a complex interaction between personal and contextual variables that influence the likelihood of a consumer experiencing an impulse to buy. The general impulsive buying tendency exerts a strong underlying influence across the antecedents, urges and buying phases. However, I also identified a relative lack of research into how social and emotional variables may influence or interact with other personal and contextual antecedents. Consequently, I conducted a review of validity and reliability in research methods to identify a suitable method to explore the research question, which is discussed in the next chapter.

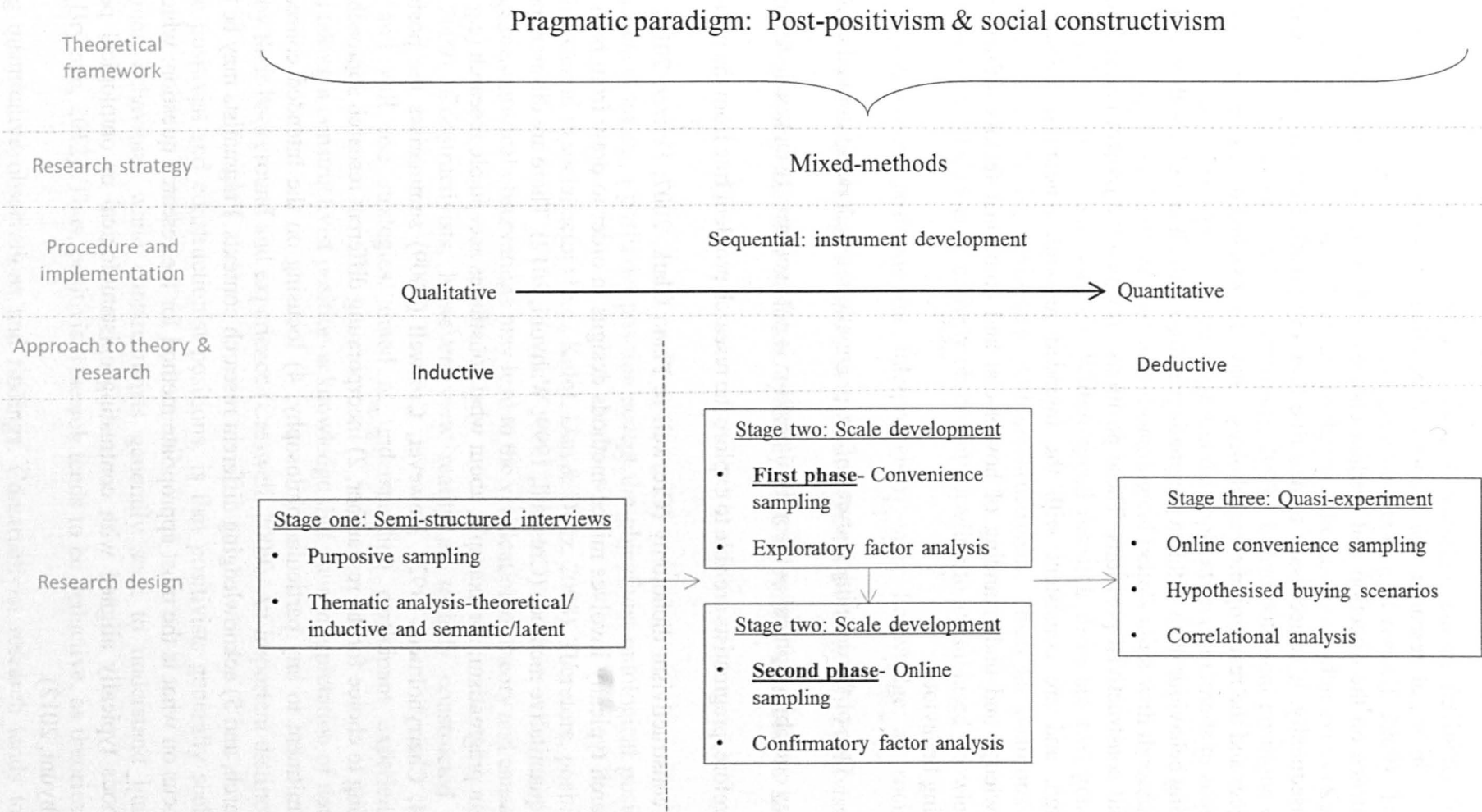
3. Chapter three: Methods

3.1 Introduction

In this chapter I introduce the methodology of the project, including a description of my philosophical position and the mixed methods strategy of the overall project. I also discuss the research strategy of the three data collection stages and consider alternative methods. As this chapter provides an overview of the project method, the specific details of the final design, procedure, and participants for each study are provided in the accounts of each study in chapters four, five and six. This approach alleviates some of the complexity in discussing a multi-method approach. In Figure 3.1 the entire project, from the theoretical framework down to the research design of each data collection stage, is summarised. The chapter follows the structure of this figure, starting with the overall theoretical and philosophical framework.

In the first section I describe the pragmatic paradigm for the project and discuss the alignment of this paradigm with the project goals. I then consider validity, reliability and sampling issues in research, and how they relate to impulsive buying behaviour and the method decisions. I next discuss the three data collection stages in turn, and the competing methods I considered. The first data collection stage involved qualitative interviews with 25 impulsive buyers; resulting in the identification of social and non-social impulsive buying tendencies. The second stage involved the development of scale items to measure the newly identified social and non-social tendencies. In the third stage a quasi-experiment was used to further test the construct validity of the scale items developed in stage two. The justification for each of these stages of data collection is provided in the preceding chapter.

Figure 3.1: Framework of the Ph.D. project



3.2 Theoretical framework

In social research, the theoretical position of the researcher has a considerable influence on the direction and method choices of their research project (Bryman, 2012). Consequently, it is necessary to describe how my position informed the rationale of the project and the resulting method choices. I have approached the investigation of impulsive buying behaviour from within a pragmatic paradigm, which includes both post-positivist and social constructivist positions. These positions informed the project research strategy and design, and are consistent with the intended research outcomes; namely, to further knowledge and understanding of how social and emotional factors influence impulsive buying behaviour.

One of the defining features of the pragmatic research paradigm is that commitment to any one philosophical or theoretical position is not necessary (Mackenzie & Knipe, 2006). Therefore, pragmatists are able to explore the research problem free from the post-positivism and constructivism dichotomy (Creswell & Plano Clark, 2007; Feilzer, 2010). Pragmatic research typically involves mixed-methods designs in order to draw from both qualitative and quantitative methods (Creswell, 1999; Wahyuni, 2012). There are different perspectives within pragmatism; for example, about what constitutes acceptable research (e.g., Garrison, 1994; Cherryholmes, 1992). However, Creswell (2009) summarises the position as: 1) leading to choice for the researcher, 2) incorporating different research approaches, 3) non-commitment to any particular philosophy, 4) focusing on the intended consequences of research, and 5) acknowledging different research contexts. Pragmatists may be considered to focus on what is the most appropriate method for the research question; which includes methods typically aligned with contrasting epistemological or ontological perspectives (Wahyuni, 2012).

3.2.1 Epistemology, ontology and knowledge positions

As described above, pragmatism as a research paradigm allows flexibility for a researcher and their epistemological and ontological beliefs (e.g., Creswell, 2009). These beliefs, respectively, refer to the theory of knowledge and the nature of what exists (Kalof, Dan & Dietz, 2008; Saunders, Lewis & Thornhill, 2009). Epistemological positions also inform what is regarded as acceptable knowledge and the application of methods to acquire knowledge (Bryman, 2012). Epistemological and ontological beliefs align with theoretical, and research positions in social research. Within social research there are two general contrasting positions, namely: positivism, and constructivism. Positivist positions (or objectivism) view knowledge as objectively observable, leading to an unbiased knowledge or reality. Constructivist positions (or interpretivism) view knowledge as socially constructed and as subjective (e.g., Bryman, 2012; Kalof, Dan & Dietz, 2008). Positivism is associated with applying scientific methods, typically used in natural sciences, to social research.

Researchers taking a positivist position accept the objectivist ontological position that reality is external to social actors (e.g., Kalof, Dan & Dietz, 2008). Therefore, positivist positions assume empirical observations may lead to the verification of theory and causality (Creswell, 2009). Constructivists, however, view reality as socially constructed and subjective, and will use strategies aimed at understanding participant experiences. Researchers taking a constructivist position acknowledge that their interpretation of data is influenced by their background and experience (Creswell, 2009). An important distinction between the positivist and constructionist positions, is that positivists generally seek to explain human behaviour, while constructivists generally seek to understand human behaviour (Bryman, 2012). Thus, positivist research tends to be deductive, as theories are tested using quantitative observations and findings. Constructivist research tends to be inductive, as observations and findings inform theory (Creswell, 2007).

Positivism has been strongly criticised for the assumption that complete objectivity is possible when viewing social reality, and that reality is free from social influence (Bryman, 2012). Post-positivist positions challenge the assumption of positivist objectivity and view evidence gained through research as imperfect (Phillips & Burbules, 2000). Post-positivists still assume objective ontological positions and assume a reality external of social actors, but accept that this reality is not free from social influence (Wahyuni, 2012). Therefore, post-positivism is an epistemological position that views the objective gathering of knowledge as possible but also challenges that this knowledge can represent absolute truth (Creswell, 2009; Phillips & Barbules, 2000). Constructivist research involves the researcher as a “passionate participant”, whereas, both positivists and post-positivists act as “disinterested scientists” (Lincoln, Lynham & Guba, 2011; p. 99).

Constructivism and post-positivism are often considered to be dichotomous positions (Creswell & Plano Clark, 2007) and the respective beliefs that inform research strategies align the methods with the intended research goals. For example, many constructivists advocate for qualitative methods, with research focused on the experience of participants in the social world. Positivists use primarily quantitative methods and focus on test reliability and validity in order to verify hypotheses. Post-positivists use mainly quantitative methods and the intended goal is to use the appropriate methods to produce non-falsified hypotheses and to develop numeric observations of behaviour (Creswell, 2009). However, in principle both qualitative and quantitative paradigms may be used with positive and constructivist positions. As research conducted within a pragmatic paradigm may include differing philosophies, it aligns with both inductive and deductive approaches to theory and research. In inductive approaches theory is an outcome of research, while in deductive approaches theory guides research (Bryman, 2012).

As pragmatic paradigms may be used with both inductive and deductive approaches, they aligned with my knowledge goals of both generating and testing theory. In order to achieve these goals, I have drawn from different research strategies and positions. The pragmatic paradigm is also consistent with the epistemological and ontological positions I have adopted relating to impulsive buying behaviour, and how these positions affected the project research design and method choices; namely, during the project I took the position of first exploring impulsive buying to investigate the reality of the behaviour through the experience and meaning it has for impulsive buyers. However, I later focused on the measurement of traits related to impulsive buying, which I assume to have a reality beyond the subjective experience of the individual research participant. Furthermore, based on the literature review I consider that impulsive buying has an objective and observable reality, but also subjective elements and motivations; for example, in how impulsive buyers understand their own behaviour. However, the focus of the thesis is largely on the observable and measurable antecedents of the impulsive buying tendency.

The relatively unexplored influence of social factors as impulsive buying antecedents and mediators/moderators (e.g., Xiao & Nicholson, 2013) indicated that an initial inductive research stage to explore these issues was necessary. Thus, the pragmatic paradigm aligned with the initial inductive stage to generate theory using qualitative methods; but also aligned with the later deductive stages to test the theory using quantitative methods. I have used these different approaches in a complementary manner (Brannen, 2005) by integrating quantitative and qualitative data to provide different and unique insights into impulsive buying behaviour (Bryman & Bell, 2007). The interpretivist stance I took during the qualitative phase enabled a rich account of the participants lived experiences to be used as a stimulus for theory building. This contrasted with the theory testing approach of the quantitative phase to develop the scale of social and non-social impulsive buying. The focus

of this later stage of research was largely concentrated on the testing of theory within a post-positivist knowledge position and this is especially relevant to the overall goals of the project. Unlike some pragmatist positions, which focus on consequences rather than antecedent positions (Creswell, 2009), I am interested in both the pre-cursors and consequences of impulsive buying. This has been achieved by testing the hypotheses generated from inductive research related to the antecedents of impulsive buying.

My pragmatic position can be summarised as including both post-positivist/objective and social constructionist positions; namely, in order to understand how social and emotional factors affect impulsive buying behaviour we must understand the influence of any underlying variables. However, my position is also framed within the social contexts of the behaviour and the moderating aspects of social influence. Importantly, this approach includes issues such as shared values and how impulsive buyers understand their own behaviour and how this can influence future actions. I consider the underlying reasons for impulsive buying behaviour to be as important as the outcomes.

3.3 Rigour in social research

Before I discuss the specific research strategies of the three phases of data collection (identified in figure 3.1), it is important to consider rigour in social research; specifically, the importance of validity, reliability and sampling in studies of impulsive buying. Validity, reliability and sampling were critical concepts in informing the overall research method. In this section I first discuss validity and reliability and how they relate to the research objectives and I then discuss specific sampling issues. Later in this chapter I review how validity, reliability and sampling issues informed the selection of a mixed methods approach and the competing methods I considered for the three stages of data collection.

3.3.1 *Validity and reliability*

Validity in social research refers to the integrity of inferences, or conclusions that result from research studies (e.g., Brewer, 2000; Bryman, 2012). Reliability relates to the repeatability of results (Bryman, 2012). Validity and reliability may be used to evaluate social research and the appropriateness of social research methods. Inferences resulting from research may be less valid if the method does not align with the intended research outcomes, or if the method is applied incorrectly (e.g., Creswell, 2009). As a consequence, different research methods may be considered to have particular strengths and weaknesses from a validity perspective (Black, 1999). Table 3.1 provides a summary of the forms of validity and reliability that I used to evaluate the potential research methods for my project.

Across different research strategies there is a focus on different aspects of validity, and a researcher's epistemological and ontological beliefs influence how they approach validity (Creswell, 2009). Due to the pragmatic paradigm of my Ph.D. research, and the mixed methods design discussed later in this chapter, it is important to consider validity in both quantitative and qualitative research. Within the quantitative research tradition, validity and reliability are used to ensure that research is both replicable and generalisable (Maxwell, 1992). However, there are a number of different positions on validity in qualitative research, e.g., there is considerable debate over the application of typically quantitative validity concepts (e.g., internal validity) to qualitative research (e.g., Mason, 2002; Maxwell, 1992). Given these differences, I address validity in qualitative and quantitative research separately.

In order to assess validity and reliability of research methods and strategies, it is also important to consider the research objective of my project. Brewer (2000) broadly classifies three types of research objectives in social research; demonstration, causation and explanation.

Table 3.1: Validity and reliability in social research

	Construct	Strategy
Validity	Concerns over the integrity of conclusions resulting from research	
Internal	The extent to which causal conclusions based on the results of a study are warranted	<i>Quantitative-</i> e.g., Experimental, quasi-experimental
External	The extent to which the results of a study can be generalised beyond the research context and sample	<i>Quantitative-</i> e.g., Field-experiment, correlational field-study, observation study
Ecological	The extent to which the results of a study are applicable to natural settings	<i>Quantitative-</i> e.g., Field-studies, observation study
Measurement (construct)	The extent to which a measure of a construct actually reflects that construct	<i>Quantitative-</i> e.g., Factor analysis, nomological network analysis
Face	The extent to which a measure appears to reflect the construct	<i>Quantitative-</i> e.g., Rating
Content	The extent to which a measure assesses all facets of a construct	<i>Quantitative-</i> e.g., Rating, compare again relevant context domain
Concurrent	The extent to which a measure correlates with current criterion	<i>Quantitative-</i> e.g., Correlational analysis, factor analysis, nomological network analysis
Predictive	The extent to which a measure predicts a future criterion	<i>Quantitative-</i> e.g., Experiments, quasi-experiments, Factor analysis, nomological network analysis
Convergent	The extent to which a measure demonstrates expected correlations with other variables	<i>Quantitative-</i> e.g., Factor analysis, nomological network analysis
Discriminant	The extent to which a measure demonstrates expected discriminatory properties from other variables	<i>Quantitative-</i> e.g., Factor analysis, nomological network analysis
Theoretical or credibility*	The degree that a theory resulting from a study fits the data	<i>Qualitative-</i> e.g., Data triangulation
Transferability*	The applicability of the results to other settings	<i>Qualitative-</i> e.g., Data triangulation, richness of accounts
Confirmability*	The extent to which research findings reflect the data, rather than a researcher's preference.	<i>Qualitative-</i> e.g., Data triangulation, auditing
Reliability	The degree of stability and repeatability, of a study, or a measure	
Internal	The extent to which a measurement tool's indicators correlate with each other	<i>Quantitative-</i> e.g., Factor analysis
Test-retest	The extent to which a measure is stable over-time	<i>Quantitative-</i> e.g., Repeated testing
Dependability*	Promotion of repeatability and keeping track of changes across the study	<i>Qualitative-</i> e.g., Detailed record keeping, auditing

Sources: Black (1999), Brewer (2000), Bryman (2012), Creswell (2009), Gill & Johnson (2010), Guba and Lincoln (1994) *Labelled "trustworthiness" by Lincoln and Guba (1985)

As discussed earlier, the overall goal of my project is to further knowledge and understanding of impulsive buying behaviour; therefore, the research objectives are related to all of demonstration, causation and explanation. The goal of demonstration research is to establish the existence of a behaviour, or relationship. This type of research tends to be a descriptive account of the world focusing on the prevalence of a variable, and correlations between variables. Research focused on causality seeks to go further, aiming to establish cause and effect, i.e., $X \rightarrow Y$. The third objective relates to the explanation of why: $X \rightarrow Y$, and is focused on theory development and identifying mediating (and moderating) variables.

Having identified the potential social and emotional influences through the literature review, I sought to explain how these factors mediate and moderate impulsive buying. The intention was to go further than demonstrating that a relationship exists but to test how this influences behaviour for impulsive buyers. Given the importance of impulsive buying for both retailers and consumers (e.g., Xiao & Nicholson, 2013), it was clear that the method also needed to be relevant to real-life behaviours. Within the project I focused on methods demonstrating internal, external and ecological validity. Accordingly, I evaluated competing methods for the overall project strategy and for each stage of data collection.

In order to limit practical difficulties with the project and to draw upon existing knowledge, I evaluated the methods of existing studies as a guide; a summary of 23 impulsive buying research studies which have influenced my research are provided in table 3.2. While the philosophical stance of researchers within impulsive buying is typically unspecified, it is evident that the majority of the research in this field has been conducted from within post-positivist (or similar) paradigms, and from a quantitative perspective. Consequently, much of the research has been focused on testing hypotheses related to the underlying antecedents of the behaviour, e.g., consumer impulsivity.

Table 3.2: Summary of impulsive buying research studies

Study	Sampling	Method
Quantitative		
Weinberg & Gottwald (1982)	Convenience - University students and staff	Field quasi-experiment
Rook & Fisher (1995)	Convenience - Students and shoppers	Quasi-experiment Field correlational-questionnaire
Beatty & Ferrell (1998)	Convenience - Shoppers	Field correlational-questionnaire
Wood (1998)	Convenience - Consumers	Telephone- questionnaire
Youn & Faber (2000)	Convenience - Students	Questionnaire
Verplanken & Herabadi (2001)	Convenience - Students and people at airport	Questionnaire (scale development) Questionnaire
Kacen & Lee (2002)	Convenience - Students	Questionnaire
Coley & Burgess (2003)	Convenience - Students	Questionnaire
Luo (2005)	Convenience - Students	Quasi-experiment
Park, Kim & Forney (2006)	Convenience - Students	Questionnaire
Lee & Kacen (2007)	Convenience - Students	Questionnaire/quasi-experiment
Vohs & Faber (2007)	Convenience - Students	Experiment Experiment
Silvera, Lavack & Kropp (2008)	Convenience - Students	Questionnaire
Dittmar & Bond (2010)	Convenience - Students and shoppers	Experimental
Sharma, Sivakumaran & Marshall (2010)	Convenience - Shoppers	Field correlational- questionnaire
Wong, Tu & Lin (2010)	Convenience - Students	Questionnaire
Yi & Baumgartner (2011)	Convenience- Consumers (online)	Questionnaire
Bratko, Butkovic & Bosnjak (2013)	Census of twins	Questionnaire
Qualitative		
Bayley & Nancarrow (1998)	Purposive- Consumers	Self-scripts Friendship pairs
Mixed-methods		
Rook & Hoch (1985)	Convenience - Consumers	Interviews - Questionnaire
Gardner & Rook (1987)	Quota - Consumers	Interviews - Questionnaires
Hausman (2000)	Convenience - Consumers	Semi-structured interviews - Questionnaire

Due to the predominately quantitative strategies used in studies of impulsive buying, research objectives have tended to focus on demonstrating and/or explaining impulsive buying relationships through the identification of mediating or moderating variables, (e.g., Beatty & Ferrell, 1998). There are far fewer qualitative studies, potentially due to the negative normative attitudes associated with impulsive buying (Rook & Fisher, 1995). However, the few qualitative or mixed-methods studies have produced useful and interesting insights; for example, about impulsive buying outcomes (Bayley & Nancarrow, 1998). The studies that have used qualitative strategies have tended to involve qualitative data as the first stage of a mixed-methods strategy (e.g., Hausman, 2000) to direct or support quantitative research.

The typical methods used in previous impulsive buying studies have implications for the validity of the inferences reported in the impulsive buying field; namely, as identified in the literature review, the inferences are most frequently based on correlational rather than on cause-effect experimental studies. Furthermore, there are issues associated with sampling, e.g., the frequent use of student samples may limit the generalisability and validity of the inferences. While selecting the research design for the project, I used my evaluation of the existing research to limit validity problems resulting from incorrectly selected or applied methods. Where relevant, I refer to existing impulsive buying research which has been used to inform my project.

3.3.1.a Validity and reliability in qualitative research

Qualitative research strategies are largely investigative processes, with a focus on words and meaning, rather than on quantification, in the collection and analysis of data (Bryman, 2012). Qualitative researchers apply inductive approaches to theory and tend to adopt social constructivist (interpretivist) approaches to knowledge. Furthermore, the focus of qualitative research is on the interpretation and understanding of the social world (Black,

1999). The assumptions of qualitative research tend to be different from those of quantitative research, so some aspects of validity and reliability also differ. For example, generalisability is a key factor in research for both quantitative and qualitative researchers. One of the strongest criticisms of qualitative research has been the, perceived, lack of generalisability (e.g., Bryman, 2012). The potential lack of generalisability may be one explanation for the relative lack of qualitative work in the impulsive buying field, particularly as many researchers often seek to offer insights for retailers (e.g., Beatty & Ferrell, 1998; Hausman, 2000). However, theoretical generalisability, rather than generalisability to a population, is frequently an objective for qualitative research (e.g., Lincoln & Guba, 1985a).

What constitutes validity in qualitative work is of considerable debate. Many researchers emphasise that the typical criteria to judge quality of quantitative research, such as validity and reliability, do not fit within the knowledge claims and goals of qualitative research (Bryman, 2012). However, other researchers advocate the use of adapting validity and reliability concepts in qualitative research (e.g., LeCompte & Goetz, 1982; Mason, 2002). For example, LeCompte and Goetz suggest that internal validity is high in qualitative research due to the increased involvement of the researcher (Bryman, 2012). It is the latter position that I have adopted by applying and adapting quantitative concepts to ensure the validity of the initial qualitative phase.

Some researchers argue that qualitative research should not be judged using quantitative concepts, instead suggesting new concepts to apply in judging the validity of qualitative work (e.g., Lincoln & Guba, 1985b). Guba and Lincoln (1994) suggest that absolute accounts of the social world may not be possible and the concept of validity and reliability in qualitative research should be re-considered as “trustworthiness”. Within trustworthiness, there are parallel concepts to internal validity (credibility), external validity (transferability), reliability (dependability) and objectivity (confirmability). Following

Lincoln and Guba's (1985) specification of trustworthiness, other researchers have created similar criteria for evaluating rigour and quality in qualitative research (e.g., Long & Johnson, 2000). However, the application of these concepts has been criticised, partly due to the post-hoc application of "trustworthiness" (Morse et al, 2002).

Morse et al (2002) present a compelling argument about the nature of validity in qualitative work, and argue that post-hoc evaluations have little to do with validity or reliability attainment. They suggest that the researcher should be responsive to potential changes during the study, for example while categorising data. If the qualitative researcher cannot respond to the data, or struggles with a lack of knowledge or working inductively, then this threatens the validity of the research. Morse et al (2002), also suggest that the method should be congruent with the research question (methodological coherence), and align with the intended research goals. Importantly, the approach suggested by Morse et al ensures that the validity of the inferences is prioritised at the outset of the project. As with quantitative strategies, they argue that qualitative researchers should aim for validation of the methods through careful planning.

As I employed a mixed methods strategy for the project, it was important to ensure I took a consistent approach to demonstrating validity of inductive and deductive methods; which ensured consistency across the qualitative and quantitative data collection stages. Consequently, I selected the initial qualitative method through an investigation of alternative methods and considered how these methods aligned with my overall project goals. This led to the selection of semi-structured interviews as the most appropriate method. The objective of the qualitative phase was two-fold, to inform the later quantitative phases and as a separate source of data. Therefore, semi-structured interviews fulfilled both objectives and enabled sufficient structure to explore specific issues, while providing the participants with freedom to explore their impulsive behaviour.

I applied the principles outlined by Morse et al (2002) during the qualitative data collection. They argue that as research progresses the data may inform the research question and methods may need to be modified. They also argue that the sampling approach must be appropriate, and participants should be selected who have knowledge of the research issues. Consequently, I adopted the use of theoretical sampling. Furthermore, Morse et al argue data saturation, rather than participant saturation, should be used. Accordingly, data should be collected until it sufficiently addresses the topic, rather than stopping data collection at a set number of participants. Threats to validity may occur if no negative cases are sought, or if the data collection ends before adequate information is collected. Researchers should also collect and analyse data concurrently, rather than analyse data after data collection is completed. This ensures an iterative process of data and analysis, increasing research validity. Therefore, I analysed the data from the interviews before starting the next interview in order to adapt the interview prompts as necessary. Morse et al (2002) further suggest checking and re-checking previously analysed data in order to develop a solid basis for new ideas. Finally, researchers should develop theory as an outcome of the research and as a template for further development. As the primary purpose of the qualitative stage was to develop theory for testing, I reviewed my analysis of the qualitative data alongside the quantitative data at the end of the project to review how the theory had developed.

3.3.1.b Validity and reliability in quantitative research

Quantitative research approaches are focused on the quantification of data collection and analysis (Bryman, 2012). Researchers using quantitative strategies are interested in developing knowledge or models of behaviour, and testing or verifying theory (Creswell, 2009). Quantitative methods researchers typically adopt positivist or post-positivist knowledge claims (Black, 1999) and test hypotheses related to the independent and dependent variables. Consequently, issues of validity in quantitative research tend to be

based on positivist or post-positivist assumptions and there is a focus on causality, generalisability, and replication (Bryman, 2012).

Quantitative research is typically evaluated based on internal, external, ecological and measurement validity, and the reliability of measures (Bryman, 2012). As can be seen from table 3.1, *internal validity* concerns the extent to which cause-effect inferences are warranted. *External validity* refers to generalisability of inferences to other settings or participant groups, while *ecological validity* concerns the applicability of the results to natural settings. *Measurement validity* (or construct validity) relates to the measurement tools used in research and whether they measure what they are supposed to, and *measurement reliability* concerns measurement tool stability. All of these forms of validity are important indicators of inference integrity. The specific focus of a researcher, e.g., demonstration or explanation, affects the appropriateness of a method for their research. My research objectives, which involve identifying and explaining social influences in impulsive buying behaviour, led to a focus on methods demonstrating strong internal, external and ecological validity. However, due to the inherent challenges of conducting research into impulsive buying, such as identifying impulsive buyers, a pragmatic approach to method selection for stages two and three of the thesis data collection was necessary. A further consideration was the need to demonstrate measurement validity for the new scales during the second stage of data collection.

As stated earlier, researchers of impulsive buying have often used quantitative methods to draw explanatory inferences about the behaviour. However, due to the questionnaire based methods of many impulsive buying studies, the internal validity of inferences may be relatively weak. While determining cause and effect is a focus for many quantitative researchers, quantitative methods vary in the extent to which they can demonstrate different forms of validity (Saunders, Lewis & Thornhill, 2009). Furthermore,

although a particular method may typically demonstrate high forms of validity, there may be validity issues arising from application, e.g., the failure to use probability sampling necessary in a true experimental design. Consequently, there are threats to validity based on both research strategy and method of application.

Researchers concerned with determining causality typically focus on experimental research designs which employ probability (i.e., random) sampling and assign participants to either an experimental or control group. In these designs the independent variables are manipulated for some of the participants, thus allowing a comparison with a control group. Such designs are very strong in demonstrating internal validity (Black, 1999), but are rarely used in studies of impulsive buying. Where experimental designs are used to explore impulsive buying they are typically quasi-experimental in nature, and lack the randomisation required for a true experiment. Although experimental designs offer increased internal validity, they also suffer from threats to external and ecological validity (Donnelly & Trochim 2007). As I was interested in extending the results of my study beyond the sample and research setting, a true experimental design would have lacked external and ecological validity.

The practical limitations of purely experimental designs were also significant barriers to the use of an experiment in the quantitative stages of my study. I considered the use of quasi-experiments to be more appropriate, as these designs have been used to good effect in the impulsive buying field (e.g., Luo, 2005). Quasi-experimental designs mitigate some of the practical issues involved in classical experiments but retain much of the control; they have some of the characteristics of true experimental design, but with no random assignment of participants (Black, 1999). Therefore, they suffer from increased threats to internal validity as they do not fulfil all of the criteria for a true experiment. However, the potential to demonstrate ecological validity is somewhat increased due to the reduced restrictions on

sampling and variable manipulation. For example, Rook and Fisher (1995) developed a scenario based study to test scale items for their *buying impulsiveness scale*. Through a combination of the quasi-experimental design and scenarios, they were able to increase ecological validity, while retaining the control of experimental design. My objective following the qualitative interviews was to demonstrate that a relationship between social factors and impulsive buying existed and to explore the reasons why. Assuming a relationship between these factors could be demonstrated, the quasi-experiment design offered the opportunity to examine this relationship in further detail during the final stage of data collection. Importantly, the potential for scenario based quasi-experiments to demonstrate relatively good internal and ecological validity aligned with the validity objectives of the project.

Both experimental and quasi-experimental designs suffer from threats to external validity. Shadish, Cook and Campbell (1979) outline five threats relating to external validity: the generalisability of the results beyond the particular participant's group in the sample; beyond the study context; and from the past to the future; and the effects of experimental pre-treatments and reactive effects to the experiment conditions. To mitigate against these threats and to improve ecological validity I considered the use of a field experiment for stage three. Field experiments use the experimental design of randomised sampling and control groups, but in more naturalised settings (Black, 1999). As field-experiments involve some form of manipulation and control they retain the good internal validity of the classical experiment design. Furthermore, the field setting leads to fewer threats to external validity compared to a laboratory based experiment. However, field-experiments may still suffer from issues such as reactive effects if participants are aware of the study and change their behaviour. There were also significant practical barriers with using a field-experiment in relation to my research. For example, manipulating the social variable would have been very

difficult to achieve without influencing behaviour of the participants in ways not relevant to the experiment, and thus affecting the internal validity.

Correlational field studies have been used by a number of researchers of impulsive buying in order to increase ecological validity (e.g., Beatty & Ferrell, 1998). Although it may be difficult to control extraneous variables, field studies offer the opportunity to explore impulsive buying in a real-world context. Beatty and Ferrell explored the role of emotional variables in impulsive buying alongside time and money constraints, allowing them to draw inferences based on behaviour in a shopping centre. Therefore, the ecological validity of their study was strong. Due to the importance of ecological validity for exploring impulsive buying, I considered a field study as the competing method to a quasi-experiment for testing the newly developed scales in the final stage of data collection. However, the relative lack of control of the context and lack of ability to manipulate the variables related to social behaviours were significant weaknesses in relation to internal validity. Furthermore, there are potential issues with sampling in the field which are discussed further in the *sampling* section later in this chapter.

The importance of ecological validity when exploring consumer behaviour may help to explain the lack of experimental studies in impulsive buying research. However, researchers have often explored impulsive buying outside of the retail environment using non-experimental methods with student samples and correlational methods. In such studies, researchers seek to explore impulsive buying relationships but without manipulation of the independent variable (Black, 1999). Therefore, the relationship between the dependent and independent variables occurs naturally rather than through researcher's control (Brewer, 2000). However, researchers may attempt to infer causation by relying on temporal effects, i.e., "Y" precedes "X". While correlational studies require a measure of the independent variable and dependent variable, there is no manipulation of the independent variable. In

correlational studies internal validity is often weak, as are external and ecological validity. For these reasons I ruled out a purely correlational study.

Self-completion questionnaires are a frequently used method to explore impulsive buying (see: table 3.2). Purely self-report questionnaire methods offer a relatively simple option for data collection, however, there are also threats to external and ecological validity. An example of a purely correlational study is provided by Youn and Faber (2000), who asked students to complete a questionnaire that included a scale of impulsive buying tendency (Rook & Fisher, 1995). The advantages of their method were the ease of application and the ability to correlate a number of potential independent variables. However, the inferences from the study were based on recalled behaviour and demonstrated poor ecological and external validity, such studies may also suffer from common method variance.

Response and return rates can be also be an issue with questionnaires (Black, 1999). Problems with response rates can suggest a skew towards people who have the time or inclination to respond. For example, a questionnaire sample may comprise 70% men and 30% women suggesting there is some bias in the response. However, self-report questionnaires are still a useful tool during scale development (e.g., Rook & Fisher, 1995; *buying impulsiveness scale*). The ease of application allows a large group to be sampled quickly and easily, and convergent and discriminant validity can be tested though the inclusion of existing scales. Thus, ensuring the developed scale is subjected to appropriately large samples for factor analysis. Measurement validity concerns are particularly relevant when evaluating the validity and reliability of newly development psychometric tools (e.g., Clark & Watson, 1995). Measurement validity refers to the relationships between a) the indicators (i.e., items) and the latent construct (i.e., the variable the measurement tool should measure), and b) the latent construct and related constructs, or behaviours. The types of measurement validity typically tested during scale development are summarised in table 3.1.

Generally, these forms of validity are measured using some form of visual analysis (i.e., comparing items to the constructs) and statistical (e.g., factor) analysis. Testing the measurement validity of the scales was an important process during the social and non-social scale development. Consequently, during the second stage of data collection I used self-report questionnaires to test the scales alongside existing measures of impulsive buying and personality. Given the necessity for initial factor analysis, convenience sampling was used during phase one of the scale development, enabling a valid refinement of the item pool. More representative sampling was then used during phase two of scale development.

3.3.2 Sampling in social research

Sampling refers to the process of selecting the subset of a population required for data collection (Bryman, 2012). The chosen subset is referred to as a “sample” and is selected to be representative of the desired population. Sampling issues influence the generalisability of research results, and, therefore, affect external validity. There are two broad approaches to sampling, probability and non-probability. In probability sampling each member of the target population has an equal chance of being selected and, thus, it is truly randomised. Non-probability approaches cover any sampling method outside of probability approaches. Both probability and non-probability sampling may be used in qualitative and quantitative designs, but probability sampling is much less frequently used in qualitative studies (Bryman, 2012). Furthermore, due to the different knowledge claims and intended outcomes in quantitative and qualitative research, there are different sampling issues across these strategies. Bryman outlines three potential sources of sampling bias: 1) use of non-probability or non-random sampling, 2) inadequate sampling frame, and 3) participant non-response. The major sampling approaches in both quantitative and qualitative strategies are summarised in table 3.3.

Table 3.3: Sampling approaches in research

Sampling approach	Definition	In practice
Quantitative		
Probability	Randomised sampling where each member of a population has a chance to be selected	Necessary feature of experimental research, intended to increase generalisability
Simple random	Basic form of probability, each population member has equal chance of selection through use of random number generation	As above
Stratified random	Sampling to ensure proportional representation	As probability, but with the intention to increase representativeness on key variable(s)
Multi-stage cluster	Where the population is dispersed, two stage sampling can be used, e.g., 1) sample locations, 2) sample people within those locations	As probability, often used where practical issues limit purely random sampling from full population
Non-probability	Any sampling approach which does not use probability sampling	Frequently used in questionnaire style research, limits generalisability but is much easier to obtain and may allow a larger sample size
Convenience	A sample that is chosen due to accessibility	As above
Snowball	A type of convenience sample, where each participant is used to establish contact with other participants	As above, but may be used to increase sample size or widen participant pool
Quota	A sample chosen to reflect the characteristics of a population (a type of purposive)	As above, often used by market researchers
Qualitative		
Purposive	A sample chosen to be relevant to the research question or topic	Sampling used to ensure the participants have knowledge of the research question, may be associated with ethnography, interviewing, observation etc.,
Theoretical	A type of purposive sampling, where the generation of theory leads to further sampling	As above, but associated with grounded theory

Sources: Black (1999), Bryman (2012), Creswell (2009)

The difficulties in obtaining probability samples for experimental research designs helps to explain the lack of this form of sampling in the impulsive buying field. Lynch (1982) argues that sampling from a general set of “consumers” has severe difficulties due to the problem with identifying all of the cases to be sampled. This leads to significant difficulties

when exploring impulsive buying, since probability sampling would require the whole of an impulsive buying population to be sampled. Furthermore, it can be difficult to establish where the independent and dependent variables are exhibited, e.g., how does the researcher decide or identify which consumers exhibit which behaviours? This was a significant issue in my project, as the population I targeted was the general set of “impulsive buyers” or “consumers”. Accordingly, for the qualitative and quantitative stages of the project I considered the use of convenience or purposive sampling of known impulsive buyers identified through the impulsive buying tendency; as used in many impulsive buying studies (e.g., Arnold & Reynolds, 2009; Beatty & Ferrell, 1998; Hausman, 2000; Lee & Kacen, 2007; Lee & Yi, 2008; Rook & Fisher, 1995; Sharma, Sivakumaran & Marshall, 2010; Verplanken & Herabadi, 2001).

In order to ensure the validity of the project sampling approaches, I adopted the approach of Bryman (2012) who suggests it is necessary to follow four key phases in collecting data from humans: (1) define the population to be sampled; (2) decide on the sample design, such as probability or quota; (3) identify the sample from the population; and (4) identify the required sample size. For both the quantitative and qualitative phases of my project the population were broadly defined as “impulsive buyers”. However, the difficulty in accessing the full population of impulsive buyers and in defining the full population, affected the sample design. Therefore, it was necessary to consider alternative non-probability sampling methods. Although non-probability methods results in a less random sample, they avoid many of the practical issues with probability samples. Convenience (or opportunity) sampling is a popular method in quantitative impulsive buying research, and uses accessibility as the criteria for sample selection. In this sampling design, participants are asked to take part based on their availability, e.g., consumers leaving a certain shopping centre. Convenience sampling is often used in the first stage of scale development (e.g.,

Clark & Watson, 1995), due to the large sample sizes required for the statistical analysis. Accordingly, convenience sampling was used for the initial scale development phase during the second stage of the Ph.D.

While convenience sampling offers advantages for use in scale development, it also lacks generalisability in comparison with probability samples. The recruitment process is not entirely random and there may be bias in the choice of participants e.g., the sample may be biased towards a particular social class or geographic location. Consequently, I sought a more representative sampling method for phase two of the scale development; this was an important step to improving the external validity of the inferences by increasing generalisability. Accordingly, I considered the use of online sampling methods for phase two of the scale development (and later quasi-experiment). The use of online sampling approaches is an increasingly relevant issue in quantitative research as on-line sampling allows questionnaires to be distributed to a large audience with ease (e.g., Gosling et al, 2004). For example, the UK Office for National Statistics report that 76% of adults accessed the internet every-day in 2014 and only 8% never used the internet. These figures suggest that the internet has the potential to reach a large percentage of the UK population. However, there may be potential issues with age bias, i.e., in the 65+ age group less than 50% accessed the internet every day, and 28% of the over 65s never used the internet¹⁰.

Despite the potential strengths of online sampling methods, there are some concerns over the external validity of this approach, such as whether such sampling is as representative as traditional studies (Paolacci, Chandler & Ipeirotis, 2010). However, online sampling methods appear to generate more representative samples in terms of gender, age, socioeconomic status and geographic location, and equally representative samples in terms

¹⁰ As specified by the ONS: <http://www.ons.gov.uk/ons/rel/rdit2/internet-access---households-and-individuals/2014/stb-ia-2014.html>

of race (Gosling, et al 2004). There are also measures available to increase control in online sampling, such as single use web-links allowing participants to complete the study only once. Given the increased sampling pool, I considered the internet as a useful tool for the quantitative phases of research. However, I recognise the potential issues related to sample bias which are considered further in the *discussion* chapter. I also describe the measures I took to control the online data collection, in the *scale development* and *quasi-experiment* chapters. In order to enhance generalisability, I paid for access to an online panel of consumers for the second stage of the scale development. The details of this process are provided later in this chapter and the panel is described in the *scale development* chapter.

Many of the issues covered so far are also relevant to qualitative studies; however, there are a number of unique issues to consider with qualitative sampling. Within qualitative paradigms, generalisability to populations is often considered a lesser concern as the intention is to generate and generalise theory (Bryman, 2012). However, the importance of generalisability in qualitative research is contentious. For example, Williams (2000) describes how results from interpretivist studies can represent “moderatum generalisations”, or moderate generalisations. A researcher can generalise specific aspects of the study, for example, where aspects of a situation represent instances of broader features. Indeed, some researchers argue that qualitative researchers *should* aim for generalisable research (e.g., Morse, 1999). Consequently, I followed the advice of Morse et al (2002; 2008) to sample participants with knowledge of the topic; in this case those who self-identified as impulsive buyers. This is a typical sampling design in qualitative research, where each participant is selected to purposefully represent the emerging theory. Accordingly, the developed knowledge should represent a comprehensive view of that theory.

3.4 Project research strategy

In order to identify the overall research strategy for the project, I considered the alignment of quantitative, qualitative and mixed-methods approaches with my theoretical position and the intended research outcomes (see: table 3.4)

3.4.1 *Quantitative project options*

Given the social and affect independent variables, I considered a purely correlational field-study using a similar design to Beatty and Ferrell (1998). In this design, participants would be recruited in a shopping centre and asked to complete pre and post-shopping measures to determine impulsive purchasing. The social element would have been recorded using questions about shopping companions and group cohesion (e.g., Luo, 2005). A measure of emotion, such as the positive and negative affect schedule (PANAS; Watson, Clerk & Tellegen, 1988) or the consumption emotion set (CES; Richins, 1997) was also considered for inclusion. The advantage of such a design would have been the strong ecological validity and the ability to measure actual impulsive behaviours. However, the inability to manipulate the independent variables due to the real-world setting would have limited the internal validity. Accordingly, I considered the use of a field-experiment and a quasi-experiment for increased manipulation. In field experiments, the independent variables are manipulated in a real-world setting. Therefore, I considered the use of a film to manipulate emotions while shoppers were in a real-world setting. Such a film could have been used to compare impulsive buying following different emotional responses, such as happiness or sadness. However, manipulation of the social variable would have been difficult for a number of reasons, firstly, it would have been practically difficult to manipulate the social setting. Secondly, it would have been difficult to align any manipulation of the social variable with the theory due to the relatively unknown moderating influence of the social variable at the start of the project.

Table 3.4: Alternative project quantitative and qualitative strategies

	Method	Strengths	Weaknesses
Purely quantitative	Social and emotional factors (IV) and impulsive buying (DV)	Potential for strong internal, external and ecological validity Purely quantitative means increased time to alleviate practical issues and to re-test if problems occur	Relatively unknown moderating/mediating nature of social and emotional elements creates difficulties for designing the study
Field correlational	IV and DV measured using questionnaire pre & post shopping in a shopping centre, then compared	Ecological validity	Internal validity and potentially, generalisability, practical issues
Field quasi-experiment	IV manipulated in a shopping centre (e.g., use of emotional stimuli) and DV recorded pre and post-manipulation	Internal and ecological validity	Potentially generalisability, ethical (i.e., manipulate emotion) and practical issues
Laboratory experiment/quasi-experiment	IV manipulated in lab setting (e.g., use of emotional stimuli) impulsive buying intentions recorded pre and post-measure	Internal and external validity	Ecological validity, probability sampling issues, general practical and ethical issues (i.e., manipulate emotion)
Self-report questionnaire	IV and DV measured using questionnaires and correlated.	No ethical or practical issues, simple to administer	Internal, external and ecological validity
Purely qualitative	Explore social and emotional aspects of impulsive buying	Can explore the relatively unknown moderating/mediating nature of the social and emotional variables	Cannot test any generated theory Interesting results cannot be quantitatively tested
Interviews	Impulsive buyers asked about their consumption behaviour	Allows impulsive buyers to explore their own behaviour, can cover fairly specific topics	Cannot test the theory further, generalisability and ecological validity
Observation	Impulsive buying observed in retail setting in social and non-social situation, observe behaviour	Ecological validity, observe how impulsive buyers behave in real world setting	Observation may affect how participants behave, practical issues, difficult to establish intentions
Focus group	Impulsive buyers asked as a group to explore social and emotional factors of their behaviour	See: interviews, and specifically allow group exploration of social IV	Ecological validity, social norms may affect responses, cannot test theory further
Mixed methods	Combine both qualitative and quantitative methods	Enables inductive and deductive approaches, can both explore the unknown issues and test theory	Quantitative and qualitative strategies may not be compatible, practical issues of mixing research

*IV = independent variable, DV = dependent variable

Any manipulation of the social variable could have resulted in incomplete or misleading information. Furthermore, while a field quasi-experiment would have demonstrated relatively high internal and ecological validity, it is ethically dubious to manipulate emotions. Introducing unnatural manipulation may also have threatened the external or ecological validity.

I also considered a non-field setting for the project strategy, such as the use of a laboratory experiment or a simple questionnaire-based study. A lab experiment following the same design as the field experiment, offered increased control over extraneous variables and the potential for high internal validity. However, because probability sampling is very difficult to implement in consumer research (e.g., Lynch, 1983), I considered the lesser requirements of a quasi-experiment to be more appropriate. For example, a quasi-experiment to manipulate the social independent variables in a lab setting had a manipulation advantage over the field setting where the social independent variables would be difficult to control. The relatively strong internal validity of a quasi-experiment would have been an advantage, but the non-field setting would have negatively affected the ecological validity. Furthermore, the difficulty with probability sampling threatened the external validity. I also considered a simple questionnaire design to measure the relationship between the impulsive buying tendency and emotional or social factors. The simplicity of the questionnaire design was desirable, but with significant threats to the internal and ecological validity. However, the main weakness of any purely quantitative overall project approach was the difficulty in identifying the best method given the lack of existing research into the social variable. Consequently, it was not clear how best to approach the project in a way to uncover how social factors influence impulsive buying. A purely quantitative approach may have led to bias in the type of data that were gathered (or not) and this may have overestimated or underestimated the nature of social variables.

3.4.2 *Qualitative project options*

Using a purely qualitative strategy would have enabled me to explore the social and emotional variables using an inductive approach to generating theory through research. I considered interviews, focus groups and observations as potential methods to explore how impulsive buyers understand social and emotional effects on their behaviour. Interviews have been used to good effect in impulsive buying research (e.g., Dittmar & Drury, 2000; Rook & Hoch, 1985; Bayley & Nancarrow, 1998). One advantage of interviews is that the participants are able to lead the process and any results are generated based on the experiences of impulsive buyers. Furthermore, purposive sampling can be used to ensure the participants have experience with impulsive buying (e.g., Morse et al, 2002). However, as with any form of self-reported data collection, social desirability was a potential issue (Rook & Fisher, 1995). An observational study presented a unique opportunity to observe impulsive buyers in a typical retail environment. However, there are ethical issues if participants are unaware of the study, and social desirability effects if they are. However, the primary weakness of the purely qualitative strategies is that it would have only enabled a purely inductive approach to research and I would not have been able to test emergent theory.

3.4.3 *Mixed-methods project strategies*

Mixed methods research (or mixed research) incorporates the different approaches of quantitative and qualitative standpoints (Johnson, Onwuegbuzie & Turner, 2007). Mixed research is relatively rare in studies of impulsive buying, but has been used to good effect by a few researchers (see: table 3.2). For example, Hausman (2000) developed theory related to the hedonistic aspects of impulsive buying through qualitative interviews; she followed this with a process of scale development and correlational analysis. Combining the qualitative and quantitative methods enabled her to both develop *and* test theory through research. Furthermore, the qualitative phase of her research highlighted a number of important issues which may have been otherwise missed. Accordingly, I considered a mixed-

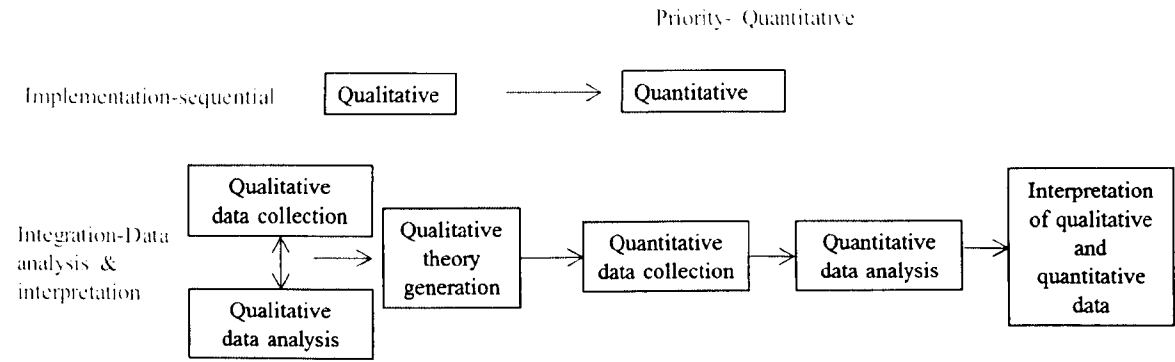
methods strategy appropriate for exploring the relatively unknown influence of social and emotional aspects of impulsive buying.

The use of mixed research is increasingly popular in social research (Bryman, 2012). However, the competing knowledge positions underlying the two strategies has led some researchers to argue that the two strategies should not be mixed (e.g., Berrios & Lucca, 2006; Guba, 1987; Smith, 1983). The detractors of mixed research argue that the methods are incompatible from an epistemological standpoint and that they should be considered separate paradigms. These arguments stem from the notion that the two paradigms have fixed ontological and epistemological positions. However, as Black (1999) argues, the two methods may be suitable beyond any particular fixed epistemological position. Furthermore, advocates of mixed research argue that complementary methods align with the increasingly dynamic and complex nature of research (e.g., Johnson & Onwuegbuzie, 2004). Therefore, the potential incompatibility of qualitative and quantitative methods is largely a philosophical, rather than a practical, issue. Given my pragmatic position, I do not consider qualitative and quantitative methods to be incompatible; rather I think they can be combined to further knowledge and understanding of impulsive buying. For example, an initial inductive qualitative approach to research allowed important aspects of the impulsive buying process to be uncovered. Importantly, a qualitative phase enabled me to explore and uncover issues related to the social and emotional variables and then test the related theory on a larger sample. This assisted with identifying the direction of the quantitative phases of the project and to identify potential areas of interest. However, a purely inductive approach did not align with my post-positivist position. I consider it is important to generate testable hypotheses corresponding with the issues identified in the literature review. As discussed in the introduction, researchers adopting a pragmatic positions typically use mixed-methods

(Creswell, 2009). Consequently, I selected a mixed-methods strategy for the project, starting with a qualitative stage to explore impulsive buying with impulsive buyers.

3.4.3.a *Mixed-methods procedure and implementation*

Figure 3.2: Mixed-method strategy for the project



Within mixed-research strategies, there are a number different strategies related to the implementation, priority and integration of the data (Creswell, 2009).

- *Implementation sequence:* This refers to the stages at which the qualitative and quantitative data are collected. This can either be in stages (sequentially) or at the same time (concurrently).
- *Priority:* This is the weighting given to the data, this may be either equal or skewed towards qualitative or quantitative.
- *Integration:* This refers to the stage at which the data are integrated. This may be at the data collection, data analysis or data interpretation phases, or a combination.

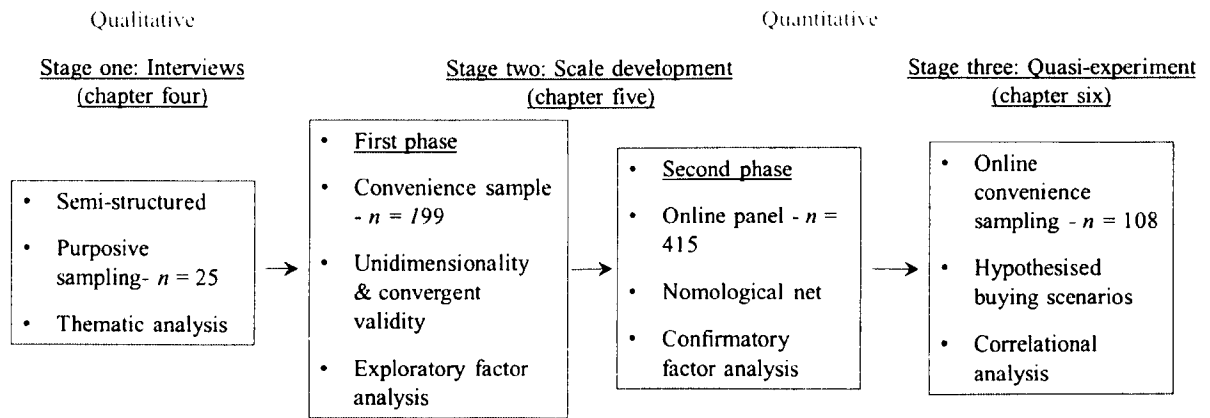
In figure 3.2, the implementation, priority and integration decisions of the project's mixed-methods strategy are shown. The use of the initial qualitative stage, to explore the social and emotional variables and impulsive buying, supported the use of a “confirm and discover” rationale (Bryman, 2012). Accordingly, I selected a sequential-exploratory approach enabling the inductive qualitative process to be supported by the later deductive process of hypothesis testing. Following the advice of Morse et al (2002) the qualitative

data analysis was performed concurrently with the data collection. The concurrent data analysis enabled me to modify the data collection as new issues emerged, thus increasing the internal validity. The sequential approach also ensured important issues were identified during the qualitative stage before the quantitative stage was designed. A concurrent form of data collection would have required the two forms of data to be collected simultaneously and this approach did not align with the purpose of the mixed-research.

As previously described, my knowledge beliefs/claims within the pragmatic paradigm centre on post-positive knowledge positions. The priority of the project was the quantitative stage, during which the hypotheses generated from the qualitative stage were tested. As the priority was the collection of quantitative data, there were two stages of quantitative data collection following the qualitative stage: firstly, the scale development; and secondly, the testing of the scale in a quasi-experiment. I analysed the qualitative data during the data collection and included identified issues in later interviews, for example, the inclusion of a separate prompt on internet impulsive buying. The data from both the quantitative and qualitative stages were also integrated at the end of the project. During the quantitative stage the qualitative data were analysed with the emerging quantitative data. Reviewing the qualitative data during the scale development was especially important as the construct validity of the scales was paramount. Therefore, I reviewed the information from the qualitative stage while I was drafting the item pool to ensure the items aligned with the qualitative data.

3.5 Research design

Figure 3.3: Full project research design



*adapted from figure 3.1

3.5.1 Project stage one: Qualitative stage (Chapter four)

3.5.1.a Alternative designs

The purpose of the qualitative stage was twofold, 1) as a research mechanism to establish the importance of social and emotional elements of impulsive buying to guide the project, and 2) as a separate source of data for integration with the quantitative data. To ensure the method aligned with these goals (e.g., Morse et al, 2002) I considered three alternative qualitative strategies, namely: 1) interviews, 2) focus-groups/group interviews and 3) participant observation (Bryman, 2012). Interviews and focus groups typically involve a researcher discussing the target behaviour and variables face-to-face (or via the internet/telephone) with participants. Focus groups are a particular form of group interview, with a fairly tight focus on particular issues where the interaction between the participants is a key feature (Bryman). Interviews may be either unstructured or semi-structured (Black, 1999). Unstructured interviews tend to be conversational in style (e.g., Burgess, 1984) and involve no more than a brief set of general topics that may be covered. Semi-structured interviews involve the use of prompts to a greater extent, and fairly specific issues are

explored. However, the participant is also given leeway in how they respond (Easterby-Smith, Thorpe & Jackson, 2008).

In participant observational methods researchers typically observe behaviours, listen to conversations and, potentially, interview participants (Bryman, 2012). A participant observational method would have provided an opportunity to view impulsive buying behaviour in a typical shopping environment (Creswell, 2009). For example, I could have accompanied impulsive buyers on a typical shopping trip, and prior to the study interviewed them about their usual shopping behaviour and shopping intentions. During the shopping trip participant behaviour could have been observed and a follow up interview then used to explore the effect of the emotional and social aspects of impulsive buying on their behaviour. Provided participants were comfortable discussing the research issues, an observational study may have provided some interesting results, such as in relation to the emotional aspects of impulsive buying. However, the practical difficulties with investigating social factors through observation were a significant barrier to the use of this method. It is also difficult to establish participant intentions behind their behaviour during observations (Black, 2008). Furthermore, participants may modify how they behave or may feel uncomfortable while being watched. Participant observation methods also involve a significant outlay in terms of time and money, which were beyond the scope of the qualitative stage. The primary concerns with the observational methods were both practical and theoretical. Most importantly, it would have been difficult to identify where the social and emotional variables interacted across the impulsive buying process through pure observation.

Unlike participant observation methods, interviews or focus groups have fewer practical issues and, importantly, allowed a more specific exploration of the social and emotional issues. Both group and one-on-one interviews have previously been used to explore impulsive buying (e.g., Bayley & Nancarrow, 1998; Rook & Hoch, 1985). The

advantage of group interviews is that the participants can interact as a group, and explore issues independent of the researcher (e.g., Bryman, 2012). However, there can be significant social desirability effects in group interviews as the participants may modify their responses in accordance with any developing group norms. For example, some participants may have identified impulsive buying as a positive or negative behaviour, leading to other group members altering their responses. There are further theoretical issues when using group interviews, as it may be difficult to establish where the group setting is influencing the results. I considered that this was a particular problem for the qualitative phase, as it was vitally important to identify specific issues for generating theory. There are also practical issues of interviewing multiple participants at the same time, such as finding suitable locations and times to suit all participants. Compared with group interviews one-on-one interviews avoid some practical issues, but lack the insights that develop from group discussion. Furthermore, there may also be social desirability effects with one-on-one interviewing. Despite the limitations of one-on-one based interviewing, I considered it to be the most appropriate technique due to easier identification of the social and emotional factors and the practical and theoretical problems associated with focus-group/group interviewing. Importantly, the one-on-one interviewing approach aligned with the two goals of the qualitative stage, i.e., as a guide for the quantitative stages and as a separate source of data.

3.5.1.b Sampling and procedure

To ensure the participants had experience with the research topic, purposive sampling was used. As discussed earlier, this method increases the validity of qualitative research by ensuring that negative cases can be sought. All of the participants had some experience with impulsive buying and I was able to check the theory against *all* cases. A non-purposive form of sampling, such as recruitment of anyone who is willing to take part, would have threatened the validity as the importance of particular issues may have been exaggerated if there were fewer impulsive buyers. Purposive sampling was especially

important given my use of data saturation. If I recruited consumers who rarely engaged in impulsive buying, the data may have suggested that saturation had been achieved simply because the participants had less experience with the issues.

Given the specific topics of discussion for the interviews, I used a semi-structured approach. An unstructured approach would not have enabled me to explore the research topic with any form of structure, and did not align with the intended goals. Thus, using an unstructured approach threatened the internal validity of the qualitative stage (e.g., Morse et al, 2002). General prompts (see: chapter four, figure: 4.1) related to social and emotional aspects of shopping were used, but with flexibility. This ensured the participants were not led in any particular direction but that the variables of interest were discussed in each interview (e.g., Bryman, 2012). Modifying the approach of Hausman (2000), the prompts initially related to general shopping behaviour and impulsive buying was only raised when it had not already been discussed. As established earlier, data, rather than participant, saturation is a more valid approach to establishing when adequate data has been collected (e.g., Morse et al). This form of saturation ensures all potential issues are uncovered, rather than relying on a set number of participants. This was especially important for the project as all participants had knowledge of the research topic, therefore, participant saturation may have overstated the importance of particular issues. Consequently, data collection continued until the data sufficiently addressed both the social and emotional aspects of the behaviour.

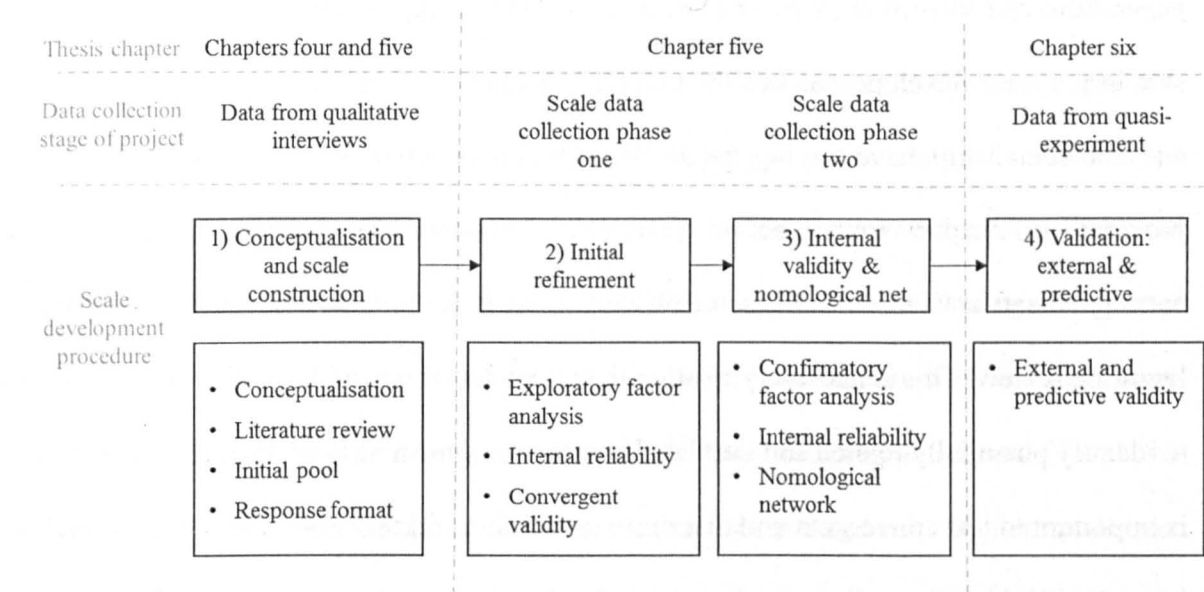
3.5.2 *Project stage two: Scale development (Chapter five)*

The analysis of the results from the qualitative stage identified a number of important results. This analysis is discussed in the *results* section of chapter four, but the overarching theory relates to the identification of social and non-social aspects of the impulsive buying tendency. The identification of the social and non-social factors suggested that a process of scale development was warranted to develop a psychometric measure of social and non-

social impulsive buying tendencies. I consulted the scale development literature (e.g., Clark and Watson, 1995) and empirical studies (e.g., Kang & Park-Poaps, 2011, Lau et al, 2006; Rook & Fisher, 1995) for best practice advice in development of a measurement instrument. I have separated the best practice advice, and the information derived from the empirical study into four processes, namely: 1) conceptualisation and scale construction, 2) data collection phase one: initial refinement, 3) data collection phase two: internal validity and nomological network, and 4) validation: external and predictive. A summary of these processes is provided in figure 3.4. In figure 3.4 I have also described at which stage of the project the data was collected from and in which chapter the analysis is discussed.

A clearly defined process of scale development was necessary to ensure the developed scale demonstrated measurement (or construct) validity. This concept was discussed earlier, but to recap, it refers to the reliability and consistency of a measure. The main validity concerns in construct validity are face and content related, and criterion related (convergent, discriminant, concurrent, and prediction) (see: table 3.1). Cronbach and Meehl (1955) suggest that the investigation of construct validity must involve at least three steps: a) the articulation of the theoretical concept and interrelations, b) the development of ways to measure the concepts proposed by the theory, and c) the empirical testing of the hypothesised concepts and their manifestations. Clark and Watson (1995) describe a model concerning measurement development related to internal (substantive and structural: Loevinger, 1957) validity concerns. The substantive validity concerns are: a) conceptualisation, b) literature review, and c) item pool creation; and the structural validity concerns are: d) test development strategies, e) data collection, and f) psychometric evaluation.

Figure 3.4: Scale development process



3.5.2.a *Conceptualisation and scale construction*

During the initial part of the scale construction I used the data from the qualitative interviews to conceptualise the social and non-social facets (see: chapter four: section 4.8). There are three main processes during conceptualisation and scale construction.

1. *Target construct conceptualisations*- The target construct (i.e., the construct the measurement tool is supposed to measure) should be carefully articulated and considered.
2. *Literature review*- A literature review should be conducted to align the target constructs within the existing literature. At this stage, related constructs can be identified.
3. *Initial scale construction*- Following the literature review, an item pool should be generated. The items should sample all possible content that may be related to the target constructs.

Target construct conceptualisations

Within the scale development literature, researchers emphasise the necessity for a clear conceptual starting point relating to construct theory (e.g., Comrey, 1988; Clark & Watson, 1998). This process can help to crystallise the theoretical basis of the scale and help with pragmatic decisions throughout the development process (Clark & Watson).

Furthermore, clear delineation of the target construct scope can assist with both item generation, and identifying related constructs in the existing literature. Therefore, the first step in the scale development was the careful articulation of the constructs, namely; social and non-social impulsive buying tendencies. The conceptualisation of these constructs is provided in chapter four (see: chapter four, section: 4.8). During the process of conceptualisation Clark and Watson (1998) suggest it is important to conduct a thorough literature review. This is necessary to align the target constructs with existing literature, and to identify potentially related and unrelated constructs. The identification of these constructs is important to test convergent and discriminant validity. Furthermore, the literature review is used to develop the nomological network for the measurement instrument. This refers to the network of related concepts to the target constructs, and the expected relationships. In order to demonstrate measurement validity a measure must fit within such a network and show appropriate correlations with the related constructs (Cronbach & Meehl, 1955).

Taking the advice of Clark and Watson into consideration, I began the scale development by revisiting the literature to review where the target constructs fit within current understanding of impulsive buying. This led to the identification of a number of related constructs, which are identified and discussed in chapter five: phase two. Furthermore, I examined existing scales of impulsive buying (e.g., Rook & Fisher, 1995) and social consumption (e.g., Kang & Park-Poaps, 2011) to eliminate potential redundancy of the new scales, i.e., that the target constructs are not already measured by an existing scale.

Initial scale construction

Following the initial conceptualisation process it was necessary to generate an item pool based on the social and non-social facets identified in the qualitative interview data analysis. Data analysis can reveal items for removal, but cannot point to data not included

in the item pool. Consequently, the sampling of all possible content related to the constructs is recommended (e.g., Loevinger, 1957). Therefore, I generated items related to the target constructs that were broader than the social and non-social conceptualisations suggested. Half of these items concerned the social impulsive buying tendency and half concerned the non-social impulsive buying tendency. To guide this process, I reviewed existing scales of impulsive buying for examples of phrases and words used when measuring the general impulsive buying tendency; in particular the wording of the *buying impulsiveness scale* items (Rook & Fisher, 1995). For example, “just do it”, “buy things spontaneously” and “bit reckless” are phrases from the Rook and Fisher scale incorporated into the item pool (see: table 5.1 for full item pool). I used examples from existing literature related to scale development (e.g., Homburg, Schwemmle & Kuehnl, 2015; Rust & Golombok, 2008) as a guide to develop tables of item provenance, which are provided in appendices 3a and 3b. The existing impulsive buying tendency scales have been shown to correlate with actual behaviour in numerous studies (e.g., Rook & Fisher, 1995; Verplanken & Herabadi, 2001). Adapting the existing phrases ensured that the new scale items measure the underlying facet of impulsiveness involved in the impulsive buying tendency, thus demonstrating content validity.

The pool items were worded as unambiguously as possible, using clear and concise language and avoiding use of double negatives which can negatively influence internal validity (Clark & Watson, 1995). While drafting the item pool I also considered the alternative response format for the scales. There are two dominant formats for personality scale: dichotomous and Likert (Clark & Watson, 1995). Dichotomous formats require participants to select between two alternatives, e.g., yes – no, while Likert scales have three or more responses, e.g., yes – maybe – no. My analysis of the social and non-social tendencies indicated that a dichotomous format of “yes” or “no” format would not adequately capture the full range of

tendencies. Furthermore, dichotomous response formats have been criticised for the unbalanced distributions (e.g., Comrey, 1988). Accordingly, I selected the Likert scale to allow a wider range of responses. Likert scales can result in more participant fatigue due to the longer completion time and result in less information than dichotomous responses. Furthermore, response bias can be an issue if the items are not carefully worded (Clark & Watson). However, Likert scales can offer a trade-off between open ended responses and dichotomous responses. Importantly, Likert scales have been used to good effect in existing impulsive buying scales (e.g., Rook & Fisher 1995; Verplanken & Herabadi, 2001; Weun, Jones & Beatty, 1998), indicating that they are suitable for measuring the impulsive buying tendency. Likert scales typically include four to seven responses, and include frequency, degree or agreement formats (Clark & Watson). As the scale items relate to statements concerning social and non-social impulsive buying, I considered an “agreement” or “disagreement” format to be the most suitable. Furthermore, I selected a five item format from “strongly agree” to “strongly disagree” to provide a sufficient but not overwhelming number of response options. I conducted a pilot to test the 40 items prior to data collection (see: chapter five: section 5.11).

3.5.2.b Data collection phase one: Initial refinement (Chapter five: section 5.2)

During the initial scale item refinement there are three main processes.

- 1) *Data collection*- The first phase of data collection typically includes collecting data from a small convenience sample of around 200 participants.
- 2) *Data analysis*- The method of data analysis is typically factor analysis; during the first phase of data collection this is usually exploratory factor analysis to generate and test models.
- 3) *Item pool refinement*- Following the first phase of data analysis, the item pool is refined before further data collection

Data collection and analysis

It is common practice in scale development to complete an initial smaller phase of data collection in order to complete initial analysis before a larger sample is accessed (e.g., Kang & Park-Poaps, 2011). This approach allows exploratory factor analysis of the initial item pool, and for item fit to be tested and models to be modified. As discussed earlier, convenience samples are recommended for this first phase (e.g., Clark & Watson, 1995) due to the accessibility and potential to eliminate problematic items at an early stage. Due to the necessity for relatively large samples in factor analysis (2–300: Arnold & Reynolds, 2003), the accessibility of the initial sample was of utmost priority. Therefore, I completed phase one of the data collection using a convenience sample of 199 impulsive buyers. Use of a comparison scale is also recommended to test the boundaries of the new constructs (e.g., Clark & Watson, 1995). Consequently, Rook and Fisher's (1995) *buying impulsiveness scale* was included as an anchor scale to ensure the new scales do not correlate too strongly with existing scales (Clark & Watson, 1995). The method of item selection during analysis was internal consistency measured via factor analysis. This is the most frequently used method of analysis (Clark & Watson, 1995) and involves assessing the correlation between items and the latent variable/s, typically using factor analysis (e.g., Lau et al, 2006; Rook & Fisher, 1995).

Item pool refinement

Following the advice of Clark and Watson (1995) the data from the analysis were reviewed alongside theory. This process ensured that the decision for removal or retention of items was not made using only statistical analysis. Furthermore, inter-item correlations were reviewed alongside Cronbach's alpha internal reliability scores. Retaining only very strongly inter-correlated items can lead to redundancy as each additional item may not add new information to the scale (Clark & Watson). Therefore, I assessed the unidimensionality of the scale items (i.e., whether they measure one factor), alongside internal consistency.

The factor structure was also explored to determine if the social and non-social items form separate scales from the overall set of scale items. Both measurement models and models including the social, non-social and buying impulsiveness scales were created and tested to ensure the social and non-social scale items do not exhibit high shared variance with Rook and Fisher's scale.

3.5.2.c Data collection phase two: Nomological network (Chapter five: section 5.3)

There are two main processes during this phase.

- 1) *Data collection* - The second phase of data collection involves sampling a larger and more representative sample
- 2) *Data analysis* – Confirmatory factor analysis should be performed on the measurement model generated during data collection phase one, and the convergent and discriminant validity of the scale items should be analysed.

Data collection and analysis

The second phase of scale development should involve sampling from a larger and more representative sample (Clark & Watson, 1995). In order to access a sample of the required magnitude (>300: Clark & Watson) I selected the data collection service provided by Qualtrics. Qualtrics panel management offers a service where participants are recruited from a larger panel. Typically participants are offered incentives for completing surveys using online based web tools and the hosting service act on behalf of the researcher. As discussed earlier, Paolacci, Chandler and Ipeirotis (2010) and Gosling et al (2004) report that samples collected using such online methods are as representative as traditional samples. I considered data collected from an internet panel to be appropriate to gain a larger more representative sample. A large sample size was chosen to test the model generated in data collection phase one. Barrett (2007) suggests that analyses of structural models where the sample size is less than 200 should be rejected by journals, unless the population from which the sample was drawn is restricted in size. Consequently, a sample exceeding 400 cases was

requested from Qualtrics. The analysis process used in stage development phase one was repeated during phase two of scale development. However, confirmatory factor analysis was performed on the measurement model during stage two. Furthermore, to review the convergent and discriminant validity of the scales, the earlier discussed nomological network was also analysed.

3.5.3 *Project stage three: Quasi-experiment (Chapter six)*

The final stage of the project was the further testing of the scales developed during stage two. As discussed in the earlier *validity* section there were a number of competing approaches and I considered quantitative and qualitative methods. The alternative methods I considered were, 1) correlational field-study/field quasi-experiment, 2) quasi-experiment: buying scenarios (in person or online), and 3) observational field study (see: table 3.5).

3.5.3.a Alternative designs

1) Correlational field study/field quasi-experiment

A correlational field study design has been employed by numerous researchers to investigate impulsive buying (e.g., Beatty & Ferrell, 1998; Hausman, 2000). Field studies may be designed to demonstrate high ecological validity, as the setting corresponds to a typical consumption environment. For example, Rook and Fisher (1995) intercepted impulsive buyers leaving a retail store during testing of the *buying impulsiveness scale*. Rook and Fisher were then able to establish if the scale correlated with impulsive purchases. However, despite the potential for high ecological validity, the reality of conducting field research can threaten external validity, e.g., bias may be introduced through sampling. The weakness of a correlational field-study for stage three, was that the social/non-social situation independent variable could not be easily manipulated. Consequently, the internal validity of the method was threatened as it would have been impossible to determine if the participants would behave differently in a different social setting.

Table 3.5: Stage three- alternative methods

Design	Sampling	Procedure	Strength	Weaknesses
Quantitative				
<i>Correlational: Field study</i>	Convenience Consumers	<ol style="list-style-type: none"> 1. Participants recruited in shopping centre 2. Pre-shopping: intention & social situation(i.e., alone or with others) 3. Post-shopping: impulsive purchases & <i>SIB</i>, <i>NSIB</i> & <i>BI</i> scales 4. Correlational analysis of <i>SIB</i>, <i>NSIB</i>, <i>BI</i> and impulsive purchases 5. Social situation included as moderating variable 	<ul style="list-style-type: none"> • Ecological validity • External validity • Predictive validity • Measuring actual behaviour 	<ul style="list-style-type: none"> • Internal validity • External validity • No control over IVs • Convenience sampling • Practical issues
DV- Impulsive buying				
IVs- S-IB, NS-IB,BIS & S/NS				
<i>Quasi-experiment: Field study</i>	Convenience Consumers	<ol style="list-style-type: none"> 1. Participants recruited away from shopping centre 2. Complete <i>SIB</i>, <i>NSIB</i>, <i>BI</i> scales. Allocate to social/non-social condition 3. Social condition: record impulsive behaviour during social trip 4. Non-social condition: record impulsive behaviour during non-social trip 5. Correlational analysis of <i>SIB</i>, <i>NSIB</i>, <i>BI</i> and impulsive purchases 	<ul style="list-style-type: none"> • Ecological validity • External validity • Predictive validity • Measuring actual behaviour 	<ul style="list-style-type: none"> • External validity • Control over social situation IV • Convenience sampling • Practical issues
DV- Impulsive buying				
IVs- S-IB, NS-IB,BIS & S/NS				
<i>Quasi-experiment-Scenarios</i>	Convenience	<ol style="list-style-type: none"> 1. Participants recruited online/in-person 2. Pre-study: <i>SIB</i>, <i>NSIB</i> & <i>BI</i> scales 3. Study: social and non-social buying scenarios 4. Correlational analysis of <i>SIB</i>, <i>NSIB</i>, <i>BI</i> and hypothesised scenario outcomes 5. <i>BI</i> included as moderating variable 	<ul style="list-style-type: none"> • Internal validity - control • External validity • Predictive validity • Control over social situation IV 	<ul style="list-style-type: none"> • Ecological validity • Hypothesised behaviour • Lower internal validity than true experiment • Convenience sampling
DV- Hypothesised impulsive buying				
IVs- S-IB, NS-IB,BIS & S/NS				
<i>Traditional</i>	In person	<ul style="list-style-type: none"> • Complete study in person 	<ul style="list-style-type: none"> • Control over environment 	<ul style="list-style-type: none"> • May limit sample • Practical issues
<i>Online</i>	Online	<ul style="list-style-type: none"> • Complete study online 	<ul style="list-style-type: none"> • Fewer practical issues 	<ul style="list-style-type: none"> • No environment control
Qualitative				
<i>Observational field study</i>	Purposive	<ol style="list-style-type: none"> 1. Participants recruited for impulsive buying tendencies 2. Participants observed in social or non-social scenario 3. Observe interactions, conversations etc., 4. Interviewed about their behaviour following study 	<ul style="list-style-type: none"> • Ecological validity 	<ul style="list-style-type: none"> • Cannot assess scale validity further • Practical issues associated with observation

* DV= Dependent variable, IV= Independent variable, NS-IB = Non-social impulsive buying , S-IB = Social impulsive buying, BIS = buying impulsiveness, S/NS = Social/non-social situation

There were also practical difficulties with conducting a field study related to the time constraints of the stage three study and the difficulty of accessing a large enough sample in a field setting.

A field-quasi experiment introduces control over the independent variable in a field-study situation, as participants can be recruited prior to the study. For example, high/low social and high/low non-social impulsive buying scale scores could have been used to allocate the participants to a social or non-social condition (i.e., 50/50 high and low in each condition). In these conditions the participants would have completed a measure of impulsive buying pre and post-shopping, in either a social or non-social real-world shopping situation. This design would have enabled me to compare the behaviour of the high and low scoring participants in each condition. However, there were practical issues that could affect the validity of this design. In particular, I would have had reduced control over the environment, and participants may have completed measures outside of their condition. There were also similar practical difficulties as discussed for the field study. The correlational and quasi-experimental field designs may have provided useful information about behaviour in a real-world setting. However, the results may not necessarily have been externally valid when considering other settings or participants (Creswell, 2009).

2) Quasi-experiment

Questionnaire based studies involving student samples or quasi-experimental approaches remain popular in impulsive buying research (e.g., Coley & Burgess, 2003; Dittmar, Beatty & Friese, 1996; Luo, 2005; Silvera, Lavack & Kropp, 2008; Verplanken & Herabadi, 2001; Youn & Faber, 2000). This may be due to the fewer practical issues associated with these designs compared with field studies or true experiments. However the relative ease of application is accompanied by threats to validity and reliability. Quasi-experiments offer increased control over the situation and variables included in a study, but

due to the setting of the quasi-experiment there is a trade-off between control and ecological validity (Trochim & Donnelly, 2007). Furthermore, there are issues with generalising the results related to the lack of probability sampling. However, a scenario design, described in the earlier *validity* section, offered a number of advantages over a field-study; namely, it was possible to manipulate the social situation independent variable and expose participants to both social and non-social hypothesised buying scenarios. The scenario based approach has been adapted by a number of researchers for different settings (e.g., Dawson & Kim, 2009; Kemp & Kopp, 2008; Parboteeah, Valacich & Wells, 2009). The scenario design enabled me to measure the predictive validity of the social and non-social impulsive buying scale by testing the correlation between the scale and the scenario outcome. Importantly, the quasi-experiment method uses a third-person response format and may reduce the effect of negative norms (Rook & Fisher, 1995).

3) Qualitative observational field study

Observational field studies are ecologically valid and provide unique insights into behaviour, but offer little or no-control over the variables. In a purely observational method the statistical analysis of potential causal/correlational relationships cannot be performed and there may be social desirability effects. The main strength of an observational study was that it would have enabled a deeper understanding of the social and non-social tendencies to be explored, in social or non-social situations. Furthermore, an observational method represented an opportunity to further explore the issues identified in the stage one interviews. However, for the purposes of testing the scales, the observational method did not enable me to explore the predictive validity of the scales. Any data collected would have been from a small sample, and would have helped to develop the underlying theory but not to test the theory already generated. Furthermore, there were a number of practical issues associated with a field study, such as cost and time, which were barriers to such a study.

3.5.3.b Selected research design for stage three

As the information in table 3.5 illustrates, all of the discussed methods offered different strengths for the stage three study. However, the practical and control issues associated with the field-study methods limited the feasibility for use in this final stage of the project. Therefore, I selected the quasi-experimental study design, using hypothesised buying scenarios (e.g., Rook & Fisher, 1995). There were a number of important final decisions related to the use of an online or in-person design, and some design and procedural issues associated with using scenarios.

Online versus in-person study

Web based data collection offers a number of benefits for research, such as increased efficiency compared with traditional studies conducted in person (e.g., Buchanan & Smith, 1999). Furthermore, online data collection offers the opportunity to access large sample pools and increased sample sizes due to the relative ease of sampling (e.g., Gosling et al, 2004). Researchers using web-based recruitment methods may also be able to gain access to participants who would not otherwise take part (Mason & Suri, 2012). However, there are potential issues with contaminated data due to the anonymity offered by the internet. For example, participants may complete questionnaires any number of times if limitations cannot be placed via the hosting service. There is also decreased control over the environment in which the participants complete the study, which may affect participant responses, for example, if a participants completes the study in a distracting environment. Despite these limitations a web based study using the scenario approach was selected due to the increased efficiency and potentially improved sampling. Gosling et al describe a number of steps researchers can take to minimise the risks from web studies which are used in the design of the quasi-experiment. The steps I took to protect the validity are described in detail in chapter six, section 6.4

Scenario design

The selection of the scenario based approach offered the opportunity to test the predictive validity of the scales in both social and non-social hypothesised situations. Accordingly, each participant completed both the social and non-social scenario and I controlled for order effects. The presentation order of measures can have significant issues for validation of measurement instruments (e.g., Cronbach, 1970). Consequently, the order of the scenarios was counterbalanced. Counterbalancing, which is typically recommended for use in repeated measures studies to reduce training effects, involves exposing half of the sample to the tests in one order (A-B) and the other half in the opposite order (B-A) (Lucas, 1992). To control for these presentation order effects, the participants in stage three were randomly allocated to group A or group B. Group A were exposed to the social then non-social scenario. Group B were exposed to the non-social then social scenario. It was also necessary to control for priming effects, i.e., the problem of exposing the participants to the scenarios immediately following the social and non-social scale completion. Priming effects can influence the response to a stimulus when previously exposed to a similar stimulus (Wiggs & Martin, 1998). If participants are exposed to a psychometric scale, the scale items may influence how they later respond. Although priming effects can last weeks, or even months they generally decrease with time (Wiggs & Martin). To avoid priming effects I designed a two phase data collection process which involved a gap of at least 24 hours between completing the scales and the scenarios.

The success of a scenario design relies on the participants projecting themselves into the situation (Rook & Fisher, 1995). Therefore, I considered the use of mind-set inductions to increase participant involvement. Mind-set inductions have not been employed in previous studies; however, tasks which affect participant mind-set can influence performance or alter mood (e.g., Taylor & Gollwitzer, 1995). Therefore, mind-set inductions, requiring the participants to consider recent social or non-social shopping

experiences, were used prior to the scenario. The piloting process and final scenario design are provided in chapter six (sections 6.3 & 6.3.1)

3.6 Summary

A review of validity in social research and existing impulsive buying research indicated that there were a number of competing methods to explore social and emotional influences in impulsive buying. Although a purely qualitative or quantitative method may have provided useful and interesting results, the mixed-method strategy aligned with both my theoretical perspective and research objective. The sequential approach to the data collection allowed the importance of social factors to be uncovered, validating the overall project strategy. The resulting scale development phase and subsequent quasi-experiment demonstrated the usefulness of an initial qualitative exploration. In the next chapter the qualitative phase is discussed and I review the interview data, which lead to the discovery of the social and non-social impulsive buying tendencies.

4. Chapter four: Qualitative interviews

Data collection stage one

4.1 Introduction

The first stage of data collection was qualitative and involved interviewing 25 impulsive buyers. My analysis of this interview data indicated that the impulsive buying tendency may not be stable across social and non-social situations. As discussed in chapter three, I designed this stage as a research mechanism to establish the importance of social and emotional factors in impulsive buying. Therefore, I used the qualitative results to guide the quantitative stages of the project, but also as a separate source of information for integration with the quantitative data. Consequently, my analysis of how social factors influence the impulsive buying tendency forms the bulk of this chapter. However, I also discuss five further themes which provide supporting evidence for the main social theme, and provide supplementary evidence about general impulsive buying behaviour.

This chapter is organised as follows: I first describe the details of the semi-structured interviewing method I used to collect data from impulsive buyers, who were identified through the *buying impulsiveness scale* (Rook & Fisher, 1995). I then describe the thematic analysis of the interview data, which indicated that the participants exhibited social and non-social forms of the general impulsive buying tendency. I also discuss five further themes related to emotion, enjoyment, outcomes resulting from impulsive buying, online based impulsive buying and contextual influences. I close the chapter by considering the potential implications of the social and non-social impulsive buying tendencies and how they may influence behaviour. This discussion leads to the justification for the second stage of the project, which is the scale development process I discuss in chapter five.

4.2 Pilot

One week prior to the first interview I conducted a small scale pilot. Three participants (M=1, F=2) completed the full process and were also asked to provide feedback on their experience, with a particular focus on the interview prompts. The pilot interviews were recorded and transcribed. However, when reviewing the transcriptions and tapes I focused on the process and reaction to prompts rather than the answers. I also deleted the data prior to starting the main study. Following the pilot a number of changes were made to the prompts to simplify the language, but the procedure and design remained the same. For example, initially I asked the pilot participants “Do you have much experience of impulsive buying while shopping?” However, in all three pilot interviews the participants responded using a yes or no answer and, as a result, I had to ask each participant to elaborate. Therefore, I discussed this with the participants and they felt that a more open ended question was better.

4.3 Method

Figure 4.1: List of final interview prompts

1. “What is your usual shopping behaviour?”
2. “When shopping what has been your experience of impulsive buying?”
3. “What has the role been of emotion in your impulsive buying?”
4. “Do social factors play any role in your shopping behaviour, particularly with respect to impulsive buying?”
5. “Is online based impulsive buying something you have experienced?”

4.3.1.a Participants

I recruited the participants via convenience sampling at the Open University, placing study adverts on social media and internal webpages associated with the University. Purposive sampling was used to ensure the participants had experience with impulsive buying (e.g., Hausman, 2000). Therefore, I worded the advertisements to target participants using the phrase “When I go shopping I sometimes buy things I had not intended to

purchase” and potential participants were asked “Does this apply to you?” The adverts were kept brief to elicit interest from potential participants and included a hyperlink to the study homepage. The study webpage contained study and consent information, my contact details, and the *buying impulsiveness scale* (Rook & Fisher, 1995).

38 people responded to the advert and, after providing informed consent, completed the *buying impulsiveness scale*. Eight scales were incomplete and removed, and a further four participants were unable to take part due to practical issues. The data provided by these 12 participants were deleted. Therefore, 6 men (24%) and 19 women (76%) were recruited, with a modal age range of 35-44 (36%) and an average *buying impulsiveness* tendency of 30.32 (SD = 4.5). The relatively high average impulsive buying tendency indicates that the participants had experience with impulsive buying. For example, the mean impulsive buying tendency was more than one standard deviation higher than Rook and Fisher’s (1995) participant means of 25.1 and 21.5. Although the recruitment took place at a University the sample comprised University staff and Ph.D. students, as opposed to the undergraduate students sampled in many previous studies (e.g., Luo, 2005). Appendix one has age and gender details for each participant.

4.3.1.b Design

I conducted semi-structured interviews on a one-on-one basis with the 25 participants. Four general prompts (see: figure 4.1) were used to explore the participants’ experiences with the social and emotional factors of impulsive buying. These prompts provided freedom for the participants to explore their own behaviour but also provided structure for the later analysis. Given the semi-structured design, the participants were probed about their behaviour and important or interesting issues were explored. I created the first question as a neutral starting point to allow participant experiences to be the driving force of the interview. Thus, all participants were given the same initial question, however,

the order of the remaining questions varied according to participant responses, i.e., the issues were allowed to naturally occur where possible. I added a prompt relating to online based impulsive buying after the completion of the fourth interview, as the first four participants all discussed online shopping behaviours. All 25 interviews were recorded for transcription with permission from the participants.

4.3.1.c Materials

Buying impulsiveness scale (Rook & Fisher, 1995)

This nine item scale contains statements related to impulsive buying e.g., “I often buy things spontaneously.” Respondents rate the extent to which they agree with the statements on a five item Likert scale from 1-5, strongly disagree to strongly agree with a range of 9-45. Rook and Fisher report a mean of 25 (SD=7.4).

4.3.1.d Procedure

4.3.1.d.i Recruitment

All participants who responded to the advert were provided with full study information on the website homepage. This information included details of the study process, how the interview data would be used and handled, how to withdraw their data and confidentiality information. The participants were also provided with my contact details and were directed to download an information sheet containing full details of the study (see: appendix two). After completing the *buying impulsiveness scale*, participants were thanked for their time and asked to provide a contact email address. All participants were also provided with a unique identifying number to be used in case of data withdrawal. To assess participant eligibility for interviewing, I computed the *buying impulsiveness* scores and compared these with the sample mean of 25, and standard deviation of 7.4 reported by Rook and Fisher (1995). Consequently, I intended to reject all participants who scored less than one standard deviation below the previously reported mean (i.e., $25 - 7.4 = 17.6$). However, all

participants reported a higher mean tendency than 18. Each was then contacted using the email address they had provided.

4.3.1.d.ii Interview

At the interview all participants completed a consent form and were provided with a hard copy of the information sheet. I informed the participants that the process would last approximately 20-30 minutes. I encouraged the participants to focus on in-store rather than on online based consumer buying for the initial prompts, but they were also given the opportunity to comment on their online behaviour. I began each interview with prompt one (see: figure 4.1), however, the remaining prompts were used only when a particular issue had not been raised by the participants. This process enabled the participants' experiences to guide the interview and the social and emotional issues to be uncovered naturally. Thus, I did not use all five prompts in every interview, but all of the participants discussed social, emotional and online impulsive buying issues. In 14 cases, the social issues were discussed unprompted and in eight cases the emotional issues were discussed unprompted. I also used probing questions, such as "can you tell me more about that issue?" to further explore the independent variables. The interview lasted between 15-30 minutes and participants were thanked for their time upon completion.

4.3.1.e Data Analysis approach

I transcribed the tapes and coded the data using NVivo. Each interview was analysed immediately and then again after all had been completed. Data were analysed using thematic analysis, this approach involves "searching across a data set...to find repeated patterns of meaning" (Braun & Clark, 2006; p.15). One of the advantages of thematic analysis is the flexibility with regards to the theoretical, epistemological and ontological stance of the researcher (Braun & Clark). Thus, thematic analysis aligned with the pragmatic paradigm I applied to the overall project. Through the analysis I created a detailed account of the

impulsive buying antecedents identified by the interview participants, with a particular focus on social and emotional factors. Given this focus on specific issues, I have not provided a rich description of the entire data set of the type described by Braun and Clark (2006); instead, I used theoretical and inductive approaches to map the interaction between the themes. Specific theoretical issues, such as emotion/social influences, were signalled through the questioning and were deliberately mapped, but I also considered emergent themes. I recorded key words and phrases using NVivo nodes and maps to create themes and my initial starting point was to identify common issues or statements to create categories (Creswell, 2009). This process resulted in a number of initial rough categories which were later refined. I then split these categories into themes and sub-themes, and created separate “interaction” categories where the themes and sub-themes interacted.

Braun and Clark (2006) describe the two levels at which thematic analysis can be used to identify themes: at a semantic level, which explores explicit meanings; or at a latent level which interprets those meanings. My analysis of the qualitative data was conducted at both the semantic and latent level, as I interpreted the accounts of the participants and the findings in relation to the existing literature. Following the first stage of the analysis I reviewed the interview tapes to make note of verbal cues. I later added these notes to the transcripts for use alongside the written data, as supporting or disconfirming evidence for themes.

4.4 Analysis results

The analysis revealed four main themes, which are summarised in the columns of table 4.1: The “evidence” row summarises the evidence I found for each theme, the “theory” row represents my interpretation of the evidence, and the “implications” row describes the potential importance of the themes.

- ***Social influence*** - This theme relates to the importance of the social situation during the impulsive buying process. Both social and individual forms of impulsive buying were discussed. The participants exhibited tendencies towards being impulsive while shopping with others, or while shopping alone. These tendencies appear to interact with emotional and enjoyment factors to influence impulsive purchasing.
- ***Emotion & moods*** - As expected, the participants described emotions and moods as important influences across the impulsive buying process, and negative and positive emotions were cited as important. Social impulsive buying appears to stem from mainly positive emotions, while impulsive buying that occurs while shopping alone appears to stem from both positive and negative emotions.
- ***Enjoyment*** - The participants regarded impulsive buying as a positive experience and the enjoyment derived appears to be related to both emotional and social aspects of impulsive buying. For example, social context may moderate experienced enjoyment stemming from impulsive buying.
- ***Outcomes resulting from impulsive purchasing*** - Both positive and negative outcomes were discussed. Positive outcomes related to enjoyment, increasing closeness of social relationships, and enjoyment of spending money. Negative outcomes related to guilt or negative emotions resulting from an impulse buy.

Two minor themes relating to online impulsive buying and contextual/environmental cues of impulsive buying were also identified. Although these themes are not directly related to the later direction of the project, they are included in this analysis as useful and interesting sources of data. Importantly, the inclusion of these themes aligns with the second goal of the qualitative phase, as I have used the qualitative data as a separate source of evidence about impulsive buying.

- ***Online impulsive buying*** - The participants were asked to focus on in-store shopping, however, many also discussed online impulsive buying. Most of the participants had experience of being impulsive online but online shopping was seen by most participants as less enjoyable and as leading to fewer impulsive purchases. For example, some of the participants reported disliking the delay between ordering a product and receiving it.

Table 4.1:Thematic analysis summary- Main themes

Theme	Emotion & moods	Social	Enjoyment	Outcomes resulting from impulsive purchasing
Evidence	23 out of 25 participants recognised the importance of moods and emotions in their impulsive purchasing. Only 2 participants provided counter examples and reported that they did not see themselves as emotional shoppers.	23 of the participants recognised that social factors had an influence, whether increasing or decreasing, on impulsive buying. This led to the categorisation of participants as social or non-social impulsive buyers. 10 participants saw themselves as mainly social shoppers/impulsive buyers and 14 as mainly non-social shopper/impulsive buyers (1 participant reported being both).	22 of the participants reported moderate to high enjoyment for shopping and impulsive buying. 3 counter examples were provided by participants who reported lower enjoyment, suggesting that some impulsive buyers do not always enjoy the experience.	10 of the participants discussed negative outcomes, and 15 discussed positive outcomes or positive aspects of the behaviour. There were counter examples to the negative outcomes, as some participants saw both positive and negative aspects to their behaviour.
Theory	The emotional antecedent of impulsive buying may be moderated by social situation. The participants reported differing emotional affects depending on if they were shopping alone or with others. The social impulsive buyers reported positive emotions as being most influential when they are shopping with others.	The results indicate participants were split into two categories, social and non-social impulsive buyers. Those in the social category went shopping more frequently with others, and reported being more impulsive when doing so. The non-social impulsive buyers went shopping alone more frequently, preferred doing so and reported no influence of being with others, or a decrease in impulsive buying with others.	Enjoyment may interact with the social setting, and the social and non-social impulsive buying tendencies. The results suggest enjoyment for impulsive buyers is moderated by situational factors. The enjoyment associated with impulsive buying was considered to influence who they shopped with, and their behaviour during the shopping trip.	Outcomes associated with impulsive buying can be both positive and negative. Many of the participants were aware of the potential for negative outcomes, but still felt it was positive; e.g., social factors. Positive and negative outcomes may be related to the emotional antecedents for some consumers. Some of the participants felt that impulse buys from negative emotions result in negative outcomes.
Implication	Knowledge of how emotion influences impulsive buying may need to be updated to include the social setting. There may also be a category of impulsive buying conducted in non-social settings due to negative emotional antecedents.	The impulsive buying tendency may not be stable across situations. Therefore, research studies may need to measure how impulsive buyers usually behave while shopping alone, or with others, in order to accurately research impulsive buying behaviour.	The enjoyment associated with impulsive buying means some consumers will avoid the behaviour in unenjoyable situations. Enjoyment may be a key moderating factor for some consumers.	Impulsive buying can be a negative factor in people's lives. However, it can also be a way to increase social closeness when part of a shopping experience, e.g., when companions all engage in similar behaviours. Impulsive buyers may need help curtailing their behaviour in some circumstances.

- *Contextual/environmental cues of impulsive buying* - Environmental and contextual cues, such as store layout or music, were seen as potential triggers of impulsive buying. For example, some of the participants reported feeling more urges to be impulsive when they enjoyed the store layout.

4.5 Main themes

4.5.1 Social influence

23 of the participants discussed some form of shopping with others; 14 discussed this social aspect to their shopping unprompted, while the remaining nine did so when prompted. This social form of shopping was described by some participants as occurring infrequently, and by other participants as representing almost all of their shopping. Consequently, one of the primary themes to emerge refers to the role of social influence across the impulsive buying process. The potential for social factors to moderate impulsive buying has received relatively limited attention in the existing literature (Xiao & Nicholson, 2013). The few studies that have been conducted (e.g., Luo, 2005; Silvera, Lavack & Kropp, 2008) have focused on the type of shopping companions (i.e., friends or family) or the role of normative influence on impulsive buying (Rook & Fisher, 1995).

The evidence from the interviews suggests that the role of social influence exceeds current understanding. Specifically, further analysis of the social influence theme revealed that the participants could be categorised as social or non-social impulsive buyers. The evidence for these categories emerged as the participants discussed different frequencies *and* preferences for impulsive buying alone or with others. Therefore, my interpretation of the data was that the impulsive buying tendency is not necessarily stable across different social situations.

The analysis indicated that social factors may be of considerable importance to, and play a role in, moderating the impulsive buying tendency. The participants who exhibited a

preference for social shopping viewed shopping as representing a social experience, and reported being more impulsive with other people than when shopping alone:

...especially if it's social I think you know you are going to have a nice day then and you are with someone you love and you'll have fun and I think it does encourage you to spend a bit more yeah.

I will go with friends or family and we will have a shop till you drop day.

These social impulsive buying participants reported that the enjoyment of social shopping led to increased browsing and increased time in the shopping environment, compared with non-social shopping. Previous research has reported that browsing time is an antecedent during the impulsive buying urges phase (e.g., Beatty & Ferrell, 1998). The results from the interviews appear to support these findings:

...so I think it is a very different dynamic when you are with other people, you know they then want to look at things so you get drawn off to look at other things and hence you might see something you weren't really looking for and didn't think you wanted to buy and might see something.

...with friends it is a proper shop till you drop day, we will go and have lunch and have coffee, and I probably shop a bit more frivolously.

Susceptibility to interpersonal influence is an important determinant in general consumer behaviour (e.g., Kang, Park & Poaps, 2012) and the interview analysis indicated it is also an important factor in social impulsive buying. The social impulsive buying participants reported being influenced by what companions bought, or how they shopped:

...you don't go out with any intentions apart from just meeting for lunch or something but once you have done that, you will have a wander before you know where you are, because someone said "oh that will look nice on you".

Influences comes from friends and family and media as well, "perhaps I should be doing that" or "perhaps I should be wearing that" or "perhaps I should have that" so I think that plays a part.

...sometimes people you are with generate the unplanned nature of your shopping expedition.

The participants who described social shopping as less enjoyable reported shopping and impulse buying less frequently with others than shopping alone as a consequence. Some of these participants described their shopping style as incompatible, or contrasting, with that of their friends or family, for example:

...friend's shopping behaviour annoys me in that they faff about for ages trying things on and then trying things on again! so I don't tend to be influenced by the social group.

The lower enjoyment associated with social shopping for the participants who reported more individual forms of impulsive buying appears to be related to reduced in-store browsing. Consequently, these non-social impulsive participants reported being less likely to browse around the shops with others and less impulsive purchasing while doing so:

I go shopping with other people but I don't tend to buy anything...so if I am on my own, I tend to buy more.

I think people shop at different rates or they spend times with different things, so it easier to do on your own.

The majority of the participants, including those who were less impulsive with others, reported some form of social shopping. However, two participants discussed a complete lack of social shopping and described shopping and socialising as separate activities:

I never do social shopping, so I would go and buy lunch and have coffee or something and then do shopping separately.

My interpretation of the social or non-social shopping and impulsive buying preferences exhibited by the participants led to the aforementioned social and non-social categorisation of the participants. However, the analysis of the remaining three main themes (emotion, enjoyment and impulsive buying outcomes) is also a strong source of evidence for the social and non-social categorisation. Consequently, I have discussed the remaining themes before I describe the implications of the social and non-social categories as the data provides context for my inferences.

4.5.2 *Emotions and moods*

The second main theme concerns the role of emotion and moods in impulsive buying behaviour. 23 of the participants recognised the importance of emotion in their shopping behaviour and described how emotion may influence impulsive urges and purchases, and whether shopping even takes place. The evidence is, therefore, broadly consistent with existing literature (e.g., Youn & Faber, 2002), with both negative and positive emotions acting as impulsive buying cues for the interview participants. 19 of the participants discussed the importance of negative emotions and 18 discussed the importance of positive emotions. This finding implies that positive and negative emotions may be equally important in impulsive buying, contrasting with previous research which has indicated a greater role of positive emotion (e.g., Beatty & Ferrell, 1998). Furthermore, the interview participants also suggested that situational factors affect when emotions are an influence.

Previous researchers report that the pleasurable aspects of impulsive buying may provide an outlet to improve negative emotions or moods (Baumeister, 2002b). This “retail therapy” aspect of shopping was endorsed by many of the interview participants. Given that shopping and impulsive buying were seen as enjoyable by the majority of the participants, it is unsurprising that many related to the “cheer up” aspect of shopping. The 19 participants

who discussed the influence of negative emotions recognised the role of impulsive buying for altering mood. For example:

Yeah, if I have a low mood I will go shopping to cheer myself up, that is always unplanned!

...I think sometimes if you think life has dealt you a bad hand and you are a bit fed up about something then buying yourself something nice cheers you up.

A common phrase used by the participants to describe their emotionally driven impulsive buying was “cheer up”, suggesting that they recognised the potential for impulsive buying to act a form of emotion regulation (e.g., Fenton-O’Creevy, Furnham, Dibb & Davies, 2012). Some of the participants recalled specific instances of their “retail therapy”:

I bought a guitar and I think I should have hung on but I think I was feeling a bit low at the time, I bought this thing to try and cheer myself up a bit, without thinking about it.

I don’t know if I would make this same decision again but it was almost because, trying to fight your way out of gloom, buy my way out of gloom.

The above quotes imply some feelings of regret associated with the emotionally driven purchase and suggest that the negative emotion or mood can lead to “bad” purchases. Although existing literature considers the regret stemming from impulsive buying (e.g., Bayley & Nancarrow, 1998), an association with particular pre-purchase mood states has received little attention. The interview findings indicate that regret was most frequently discussed in relation to negative affect. However, as I discuss in the fourth primary theme, negative outcomes were also associated with both positive emotions. The emotional states or moods discussed by the participants tended to be indiscriminate, such as “low mood” or “good mood”. However, a small number of the participants discussed the specific mood state of boredom, for example: “*If I have been bored and wondering around the shops on my own*

then making a purchase is one of those things.” Boredom has received little attention in the existing impulsive buying literature. However, impulsive buying may, for some consumers, represent a behaviour used to alleviate boredom.

While the majority of the participants recognised the influence of negative emotions, six of the participants did not consider negative emotions to be important. These participants informed me that they do not necessarily associate purchasing with improving mood. Interestingly, I categorised three of these participants as social impulsive buyers, and they described the social aspects of shopping as outweighing any negative mood. The implication was that they equate shopping with socialising and do not encounter the opportunity to impulsively buy when feeling unhappy. The relationship between positive emotions and social impulsive buying may occur because socialising can regulate negative mood/emotions without the necessity for a purchase. For example, one participant, who exhibited more social impulsive buying, suggested that being with others would negate a bad mood:

...whereas if I am in a bad mood on my own then oh yeah I will get that, but it is kind of talks yourself out of the bad mood when you are with someone else.

Furthermore, the participants who discussed boredom did so only in a non-social context, suggesting that the tendency to be impulsive with others or alone may be influenced by differing emotional cues. Evidence from previous studies highlights the general role of emotion (e.g., Beatty & Ferrell, 1998; Youn & Faber, 2000). However, the influence of emotions may exert a broader influence than is currently understood. I interpreted the relationship between socialising and mood to suggest that emotions may strongly interact with social context in influencing the impulsive buying tendency. This interpretation forms an important part of the social and non-social categorisation, and I discuss it further as evidence for the social and non-social impulsive buying tendencies.

Many of the participants also reported that positive emotions had a strong influence on their behaviour, for example: “...*but I think also, it is more so when I am happy and content, I like to go to the shops as well and treat myself.*” Positive emotionally driven impulsive buying was often referred to as a treat or reward for perceived positive behaviour, such as a productive day at work. As with the “cheer up” type of impulsive buying (e.g., Mick, 1996), using impulsive buying as a “treat” for positive behaviours, may be a promotion focused strategy to regulate emotions (Verplanken & Sato, 2011). Some participants discussed their impulsive buying stemming from positive emotions as a way to maintain a positive mood, for example: “...*sometimes I want to celebrate and so I will go and buy something new, that is my treat.*” The availability of money was also cited as a factor in positive emotions, and payday was seen as a cue for impulsive purchases. This supports the evidence from Beatty and Ferrell (1998) who report that the perceived availability of money increased impulsive urges; for example: “...*that is a bit of excitement like, “oh I have got money!” and then erm, I am more likely to buy more.*” The positive emotions associated with impulsive buying may, therefore, result in an impulsive purchase as a form of reward. Overall, the data support previous findings that emotions play an important role in impulsive buying. Furthermore, both negative and positive emotions were cited as potential antecedents or influences.

4.5.3 Enjoyment

Consistent with previous studies (e.g., Hausman, 2000) impulsive buying was considered by many of the participants to be a pleasurable activity and many discussed the enjoyment derived from the behaviour. The enjoyable nature of impulsive buying was apparent not only from the typical phrases used, but also from the manner in which the participants discussed their behaviour. Participants typically spoke excitably about their impulsive buying and it was clear that they enjoyed discussing the topic. This enjoyment was initially focused on shopping, and many of the participants discussed the importance of

shopping in their lives. This was not only related to specific shopping trips but also the more mundane types, such as food shopping, for example one participant said: “...*I am also the type of person who will go shopping for the sake of it, the fun.*” Another participant described that: “*I love shopping, I love food shopping, I love clothes shopping, I love any kind of shopping.*”

Further analysis of the enjoyment theme revealed four general factors associated with enjoyment, namely: the enjoyment of shopping socially or alone; the enjoyment of the act of purchasing and spending money; the enjoyment of buying products for others; and the enjoyment of online shopping. The first general factor relates to the enjoyment experienced by the participants when shopping alone or with others. Some of the participants considered shopping while alone to be more enjoyable, e.g., “...*much prefer shopping alone, definitely.*” Others reported feeling more enjoyment when shopping with others due to the socialising aspect:

...I do enjoy, if I am going out with the girls shopping as then you can make it like a day and where you can go and eat and chat and stuff.

You are feeling really kind of happy and relaxed and a bit more free as you are out with the girls.

Enjoyment is a crucial aspect of the impulsive buying process (e.g., Hausman, 2000). Therefore, the participants expressing more or less enjoyment of shopping and impulsive buying depending on the social situation, suggested that the impulsive buying tendency may also differ depending on the social situation. Consequently, the differing levels of enjoyment, for social or non-social shopping/impulsive buying, supported the categorisation of the participants into social and non-social impulsive buyers.

The second factor of enjoyment discussed by the participants relates to the physical act of buying. A number of researchers (e.g., Hausman, 2000) suggest that the act of

purchasing in the impulsive buying process may be more important than the purchased product. The importance of the purchasing act is supported by the interview data, as a number of the participants referred to the purchasing process as an important part of their enjoyment. Some of the participants recognised that the purchasing act can be more important to their overall enjoyment than the actual product they buy. Furthermore, the enjoyment of purchasing appears to be related to the physical act of spending money. For example, one participant discussed spending money as a method of proving to others that they have money:

Throughout my life I have been terrible with money, so I will be skint for two weeks and be really down about it and as soon as I have money I will go out and spend it just to make myself feel better, it is almost like “look I do have money” and proving it to myself.

The “proving” aspect of spending money was strongly related to impulsive buying, and the process of buying impulsively enabled this participant to prove that they had money to spend. Other participants stressed the importance of spending money as a way to enjoy their wages or earnings:

I go to work every day to make money and this is part of why I have a job you know, I am making money so I should be able to enjoy part of it, it is not just about paying the mortgage, paying the utilities, the things that are essential for life, it is nice to have something fun as well.

Spending money through impulsive buying may represent an enjoyable way of bolstering positive feelings related to employment and wages. The participants who discussed this aspect of their impulsive behaviour suggested that their wages enabled them to be impulsive and they enjoyed the impulsive buying process. This relationship between earning money and buying suggests that the ability to spend money is an important aspect of the impulsive buying process. Therefore, the results again support the findings of Beatty

and Ferrell (1998) relating to the importance of perceptions of money. The ability to be impulsive due to wages, may, therefore, be used to improve positive feelings and self-esteem. Alternatively, there may be some consumers who use the above as a rationale for their behaviour to alleviate feelings of guilt. Bayley and Nancarrow (1998) found similar mechanisms reported by impulsive buyers to cope with negative outcomes resulting from impulsive buying.

A further aspect of enjoyment expressed by participants, relates to buying items for other people. For example, one participant explained that the enjoyment she gains from shopping and impulse buying extends to impulse buying for others, such as a loved one, for example: “...if I buy myself something I like to buy other people things, that is a bit odd but it is true!” and later: “...I was literally going home and going back to the car before the parking meter ran out and I thought oh that seems nice and oh my daughter would like that so picked it up on route.” This issue also appears to be related to the enjoyable act of purchasing itself, as participants get pleasure from the act as well as from the product they buy.

Compared with in-store shopping, online based shopping and impulsive buying was seen as less enjoyable. Many of the participants discussed reduced pleasure when shopping online and discussed a more focused type of online shopping behaviour: “I do shop online but only for things I know I am going to need, so I don't browse and impulse buy online.” However, two of the participants reported being more impulsive when shopping online than in-store: “If I am going into a store I have got an idea in mind and what I wanted to buy or what I needed to buy, erm impulse buying tends to happen online.” Thus, for this participant in-store shopping was more focused and less likely to result in impulsive urges.

The general tendency for online shopping to be seen as less enjoyable appears to stem from issues relating to both practicality and pleasure. For example:

The irritating thing about buying something online is that you don't get the gratification of having...receiving the item, so quickly.

...I can't wait two days for it to be delivered, that is my problem!

Although most participants saw shopping as enjoyable, three participants described general shopping as a necessity to be endured: “*I am of the mind-set get in and get out.*” However, despite reporting lower enjoyment, these participants still discussed their impulsive behaviour, implying that shopping may lead to impulsive buying even if a consumer does not enjoy the shopping experience.

4.5.4 Outcomes resulting from impulsive purchasing

The fourth identified main theme relates to outcomes associated with impulsive buying. Previous research reports impulsive buying has found impulsive buyers associate their behaviour with guilt (Rook, 1987). Bayley and Nancarrow (1998) also report impulsive buying is associated with various negative outcomes, such as guilt and depressive episodes. More recent evidence provides further support for negative outcomes, indicating that impulsive purchasing can have a significant effect on making ends meet (Fenton-O'Creevy et al, 2012). Ten of the interview participants reported negative outcomes resulting from their impulsive behaviour. These outcomes ranged from (what they saw as) relatively minor issues such as having too many clothes or bags of unused clothes, to potentially serious issues such as struggling with money to pay off bills and credit cards.

So I have had a lot of history of impulse buying, and I never got the good result, it has always sat in my wardrobe and I thought “why on earth did I buy that?”

I might be saving a lot of money but I am spending a lot of money and if you add them all up then it's probably quite a substantial amount.

A desire for change associated with the negative outcomes was also expressed by some participants: “...and what are the factors that influence me doing that? It is a good question as if I knew I would stop doing it!” In contrast, some of the participants saw their behaviour as positive and relatively harmless: “...we are all going to die one day so you know, all you are doing is postponing the time you will have it, and if you can afford it just get it.” One participant even suggested their impulsive purchases representing their best purchases: “Impulse buys are often the best ones as they are the ones that have actually excited me, made me want them.” In some instances the distinction between the negative and positive outcomes of impulsive buying appears blurred and some of the participants discussed a conflict between a desire for change and a desire for buying, supporting existing evidence (e.g., Yi & Baumgartner, 2011).

4.6 Minor themes

4.6.1 Online impulsive buying

The majority of the participants reported making online purchases and engaging in regular online shopping. However, their online shopping was reported as being more focused and less enjoyable than their in-store shopping. Consequently, only a minority of the participants reported regular impulsive buying online. Although there is some existing research into impulsive buying online (e.g., Sun & Wu, 2011), the role of in-store antecedents, such as affect, is not clear. It is, therefore, interesting to note the types of comments made by the participants when they discussed online shopping. Two participants discussed online impulsive buying as occurring more frequently than in-store:

I don't tend to impulse buy that much in store, I tend to, if I am going into a store I have got an idea in mind and what I wanted to buy or what I needed to buy, erm impulse buying tends to happen online.

...so I actually think that online shopping is worse for me than in a town centre shopping, which I am quite surprised at, as I don't, I have never thought of myself as an online shopper.

The remaining 23 participants viewed online shopping as being much less impulsive compared with in-store shopping. These participants viewed online shopping as being more focused: *"I am quite focused with online things."* Many also discussed shopping online with a specific item or plan in mind: *"I do shop online but only for things I know I am going to need, so I don't browse and impulse buy online"*.

The lack of impulsive buying online may stem from the less enjoyable nature of online shopping, which appears to be related to the physical differences between the acts of purchasing in-store and online. For example, the time delay between purchasing and receiving the product is seen as a barrier to online impulsive buying, as it creates a less gratifying experience:

I much prefer shopping in-store, I have started shopping on-line now, but I am too impatient.

It is the immediacy of it...you don't get the gratification of having, receiving the item, so quickly.

The reduced enjoyment of online impulsive buying provides further evidence for the importance of the buying process for the impulsive buyer. However, it also indicates that physically receiving the product after the impulsive buy is also an important aspect of the buying process. Thus, in-store shopping is preferable due to the immediacy of receiving the product. Interestingly, online shopping was seen as a "chore" for some participants as they used computers during their working day. Moving from using a computer in the office environment to using a computer in the home environment was seen as unenjoyable.

4.6.2 Contextual/environmental cues

A number of researchers have reported the potential importance of contextual and environmental cues in the impulsive buying process (e.g., Beatty & Ferrell, 1998; Youn & Faber, 2000). The interview analysis supports the importance of contextual and environmental cues and suggests that the retail environment may be a trigger to buy impulsively. However, not all of the participants considered these cues to be influential and where discussed they were seen as secondary to social or emotional issues. One of the key areas where environmental cues were discussed is in relation to shopping browsing or enjoyment. For example, shop displays and store layout were cited as leading to more browsing and, therefore, to impulsive buying.

I do think the way stuff is positioned in shops is quite interesting at the moment, so to give you an example a shop called White Stuff... interestingly, doesn't necessarily put all its new stuff at the front of the shop. So it is actually encouraging you to go into the back and see what else you might pick up.

The shopping environment was frequently cited as an important factor in why online shopping is less enjoyable. Many of the participants felt that websites could not replicate the sensory or visual elements of shopping, such as touching products (e.g., Peck & Childers, 2007), as this comments shows: *"When you are in store it is there and they have nice store displays and make it look great, it is harder to do that online"*.

As expected, bargains and sales were also reported as being influential for some participants; specifically bargains appeared to trigger impulsive urges in a desire to not miss out. *"...where there is a sale and in my head I think oh I am getting a bargain or value for money I am getting more for my money than I would otherwise"*. However, other participants felt that bargains and sales did not influence their behaviour as sales do not offer genuine value, but represent the products other people don't want.

With sales, it is kind of too much effort to trawl through and try and get a bargain, yeah I am not big on sales or like yeah, I wouldn't really say, just because it is never really nicely organised so you have to trawl through it all to get a good deal.

4.7 Interaction between the themes

I conducted further analysis to explore the interaction between the themes, with a focus on how and to what extent the social and emotional factors moderated the influence of other factors. The evidence from the four main themes suggests that social and emotional factors interact across the impulsive buying phases. My analysis of the data revealed four general interactions:

- ***Social influence, and emotion and moods*** - Emotional and social factors appear to interact to influence experienced urges and impulsive purchases. For example, the social impulsive buying participants tended to discuss negative emotions as being more influential during shopping while alone.
- ***Social influence and enjoyment*** - The interaction between the social influence and enjoyment themes, suggests that enjoyment of impulsive buying may depend on the enjoyment of the social situation. The participants who reported less enjoyment from shopping with others, also reported being less likely to be impulsive with others.
- ***Emotion and moods, and enjoyment*** - The participants discussed emotions and moods occurring during a shopping trip as influencing enjoyment of that trip. Thus, emotions and moods influence experienced enjoyment, which may in turn influence experienced urges and purchases.
- ***Social influence, enjoyment, and emotion and moods*** – Social shopping enjoyment appears to moderate the influence of emotion and moods during social shopping trips. The participants who enjoyed social shopping cited positive rather than negative, emotions or moods as being influential during social shopping.

Social influence may initially affect the situation in which a consumer is shopping and may then influence their experienced emotions. The role of emotions may, therefore, be dependent on both the phase (e.g., urges or purchase) of the impulsive buying process and

the social situation. However, enjoyment of social shopping, or shopping alone, may be the initial catalyst behind the social situation in which a consumer is shopping. The participants who exhibited a preference for impulsive buying with others also tended to discuss the importance of positive moods or emotions when shopping with others. These social impulsive buyers also discussed a “cheer up” type of shopping that was conducted much more frequently when alone, for example:

...if I am in a good mood then I don't need to lift, that perhaps an impulse buy would give me. Whereas if I am in a bad mood on my own then oh yeah I will get that.

For the participants who were categorised as social impulsive buyers, shopping socially was seen as a positive experience and, therefore, they were less likely to experience negative emotions when with others. Some of these participants were less likely to go shopping with others when feeling negative, whereas other participants felt that simply being with others would improve their mood: “...but it is kind of talks yourself out of the bad mood when you are with someone else”.

However, the solitary nature of shopping unaccompanied was discussed as potentially leading to impulsive buying for the social impulsive buyers due to negative emotions: “the times where I go shopping on my own I think is when I need to cheer myself up, or is that it is more impulsive, yes it is that mood altering side of it”. The analysis also suggests that impulsive buying as a result of negative emotions/moods for social impulsive buyers is considered a more opportunistic type of shopping. Some of the participants discussed experiencing a “low mood” and consequently experiencing urges while passing the shops: “I think I would be more likely to go oh, that's pretty, that kind of cheer me up shopping would be if I was somewhere and just happened to go past a shop, you know it is more that kind of impulse”.

Emotional state also appears to moderate enjoyment associated with impulsive buying. One participant, who was categorised as a non-social impulsive buyer, described shopping as not especially enjoyable in the main but had also made impulsive purchases when experiencing a bad mood. They discussed a more emotionally driven type of impulsive buying, distinct from their usual focused shopping behaviour, as this comments shows: *“If I was having a bad day on the phones I would go up the city centre for a walk and come back with something I had not necessarily planned on buying”*.

Of the social impulsive buying participants, all but two said they would not usually be impulsive in a social situation if they were in a bad mood. Thus, the relationship between positive emotions and social impulsive buying may be a result of the enjoyable nature of companionship when shopping with others. The social setting could potentially regulate negative mood/emotions without the necessity for a purchase. For example, one participant suggested that being with others would reduce any bad mood: *“I think perhaps the social setting outweighs the bad mood...”*

The social impulsive buying participants appear to avoid going shopping with others when they experience negative moods or emotions, and, therefore, tend to associate social shopping with positive emotions. In contrast, the participants who exhibited a preference for non-social impulsive buying associate social shopping with reduced enjoyment and less positive emotions. Emotional antecedents of impulsive buying may also influence positive or negative outcomes resulting from impulsive purchases. The participants who spoke of negative emotions tended to discuss short term mood enhancement, whereas positive emotions tended to be emphasised in the longer term.

I think if you are feeling positive you tend to have a stronger outlook about the future, things you buy you are placing into a nice shiny future that you have got in your mind.

If a consumer experiences an urge to buy as a result of feeling negative, they may purchase a product knowing it will result in a short term improvement of mood. However, it may result in longer term regret, as one participant explained:

I am more likely to buy something that I then return because it was so completely impractical, whereas happy emotions are very much with a purpose in mind and erm yeah it is more elongated.

Other participants recognised that impulsive purchases as a result of negative emotions may not be wise. The interview analysis also indicated that negative emotions or moods may lead to further impulsive buying to improve feelings of guilt. This finding supports the argument of Xiao & Nicolson (2011), who suggest that negative outcomes may lead to further impulsive buying. For example:

...I suspect that those purchases are probably not good purchases for me, probably doesn't really work out in the long run but it is that instant, short term gratification.

You kinda think in the back of your head you know, oh that might make your problems go away. Of course it doesn't, it might create another problem if you haven't actually got the money to buy it.

4.8 Conceptualisation of social and non-social impulsive tendencies

The results indicated that consumer impulsive buying habits may be situated in a social context, such that some of the participants were more likely to buy impulsively when shopping with others, while others were more likely to buy impulsively when shopping alone. The important facet of these tendencies is that the participants' preference for social or non-social (i.e., individual) forms of impulsive buying appeared to translate into distinct types of behaviour. The distinction between social and individual impulsive buying discussed by the participants, suggested that the general impulsive buying tendency may be moderated by the social situation. Participants with a stronger social than non-social

tendency discussed the social aspects of their impulsive behaviour, while those with a stronger non-social tendency rarely discussed being impulsive with others. It is important to note that these social and individual forms of impulsive buying are tendencies towards impulsive behaviour that are dependent on the social context. Consequently, consumers may experience varying levels of each tendency that influence their likelihood of making an impulsive purchase in either a social setting or while shopping alone. For example, a consumer who exhibits a low social impulsive buying tendency and a high non-social impulsive buying tendency may tend to be more impulsive while shopping alone. A different consumer who exhibits a high social and high non-social tendency may tend to be impulsive both when shopping alone and when shopping with others.

Conceptualisation of the social impulsive buying tendency

The social impulsive buying tendency refers to the likelihood of a consumer experiencing a sudden, powerful and persistent urge to buy a product immediately, and with no pre-shopping intentions, while they are shopping with other people. This social dimension of the impulsive buying tendency was exhibited by the interview participants who discussed making impulsive purchases while shopping with companions. During a social shopping event, a consumer with a high social impulsive buying tendency will be more likely to experience a sudden desire to purchase an unplanned product (e.g., Rook & Hoch, 1985) than will a consumer with a low social impulsive buying tendency. Therefore, in social shopping situations a consumer's social impulsive buying tendency influences their likelihood of experiencing an impulsive urge and making an impulsive purchase.

The social form of the impulsive buying tendency appears to be strongly influenced by the socialising aspects of social shopping which lead to increased enjoyment for some consumers. The participants who discussed mainly social forms of impulsive buying also described social shopping as a positive experience. Consequently they framed their social

impulsive behaviour within the positive emotional aspects of being with shopping companions. Therefore, for consumers who exhibit a high social impulsive buying tendency, social forms of impulsive buying appear to be related to positive emotions or moods. For example, many of the social impulsive buyers discussed social shopping as tending to lead to a good mood. Thus, impulsive buying as a form of mood improvement may not be something social impulsive buyers associate with social shopping. Due to the social aspects of their impulsive behaviour, the participants exhibiting the social impulsive buying tendency also discussed the important role of interpersonal influence. However, interpersonal influence alone does not adequately explain the tendency. For example, some of the social impulsive buying participants also discussed a form of non-social or private impulsive buying occurring due to negative emotional or mood antecedents. Therefore, social impulsive buyers may also be impulsive while alone, but due to different emotional antecedents.

Conceptualisation of the non-social impulsive buying tendency

The non-social impulsive buying tendency refers to the likelihood of a consumer experiencing a sudden, powerful and persistent urge to buy a product immediately, and with no-pre shopping intentions, while they are shopping by themselves. The non-social tendency is, thus, a dimension of the general impulsive buying tendency (e.g., Rook & Fisher, 1995) that influences a consumer's likelihood of experiencing impulsive urges and making impulsive purchases in an individual shopping context. Consumers who exhibit a high non-social tendency will be more likely to experience a sudden desire to buy an unplanned product while shopping alone than consumers who exhibit a low non-social impulsive buying tendency. The non-social label I have given to this form of individual impulsive buying does not mean that the behaviour is "anti-social", and there may, for example, be social elements related to sales-person interaction. Therefore, the defining aspect of the non-

social tendency is that it relates to impulsive buying behaviour that occurs while a consumer is shopping unaccompanied.

The interview participants who exhibited the non-social tendency discussed making more impulsive purchases while shopping as an individual rather than when shopping with companions or as part of a group. These participants discussed an increased enjoyment of shopping while alone, compared with shopping with others. Although some of these participants did engage in social shopping trips, they described being much less impulsive on these occasions than when shopping by themselves. Overall, the non-social impulsive buyers discussed rarely being impulsive with others, even if they shopped in social settings. While discussing the emotional aspects of their impulsive behaviour, the participants who exhibited the non-social tendency discussed both positive and negative affect associated with their impulsive behaviour. Impulsive buying in an individual rather than in a group setting appears to be related to both mood enhancement and mood improvement.

4.9 Discussion

The analysis indicated that consumers may display social and individual/non-social forms of the impulsive buying tendency. Therefore, the social setting of a shopping trip can moderate the general impulsive buying tendency, and may mediate impulsive behaviour. The analysis also revealed a number of related primary themes, namely: the role of emotion across the impulsive buying process; the enjoyment that impulsive buyers experience when impulsive buying; and the potential for impulsive buyers to experience both positive and negative outcomes from their behaviour. Importantly, there appears to be a strong interaction between emotion, enjoyment and social situation that influences impulsive buying across the antecedents, urges, purchasing and outcome phases. Overall, the data supported existing research but also indicate that the impulsive buying tendency may not be stable across social

situations. Therefore, the findings suggest that it may be necessary to consider the social situation and a consumer's usual behaviour during research into impulsive buying.

The participants discussed the pleasure they derived from their impulsive buying, therefore supporting existing research emphasising the hedonistic nature of impulsive buying (e.g., Peck & Childers, 2006). There also appears to be a relationship between shopping enjoyment and the extent to which impulsive buying occurs; thus, impulsive buying is a pleasurable experience and, as suggested by existing research, frequent impulsive buyers also tend to find shopping more enjoyable. However, there is also evidence that consumers who experience low enjoyment with shopping may still engage in impulsive buying. This suggests that there are forms of impulsive buying that are unrelated to or less focused on the hedonistic aspect of the process. Negative affect may play a role in the relationship between low enjoyment and impulsive buying, as the participants who reported less shopping enjoyment still reported making impulsive purchases during a low mood.

In support of previous studies (e.g., Beatty & Ferrell, 1998; Lee & Yi, 2008) both positive and negative emotions were described as important by many of the participants. However, emotions appear to interact with the social and contextual situation to influence impulsive buying urges. The participants' experiences provided preliminary evidence that negative emotional states are antecedents, or influence urges, mainly in more private or non-social shopping situations. Whereas, the type of behaviour discussed by the participants suggests that positive emotions can lead to impulsive buying in both social and non-social shopping. Impulsive purchases made in response to negative emotions were often described as short term mood enhancement, implying that there is the potential for repeated impulsive behaviour due to negative moods (Xiao & Nicholson, 2011). For example, some of the participants recognised the negative impact of impulsive buying and suggested that these negative feelings gave rise to further impulsive behaviour. However, the evidence in

previous studies has been mixed in this regard, with some studies finding no regret or guilt over impulsive buying as a result of negative emotions (Atalay & Meloy, 2011).

The identification of social and individual aspects of the impulsive buying tendency is the most significant finding to emerge from the interview stage. The prominence of social factors discussed by the participants, suggests that they influence behaviour beyond what has been previously reported (e.g., Luo, 2005). Importantly, more individual forms of impulsive buying, as represented by the non-social tendency, may also be a distinct type of behaviour for some consumers while they are shopping by themselves. Ten of the participants were identified as social impulsive buyers and 14 were identified as non-social impulsive buyers. In contrast to existing research (Luo), the findings indicate that it is not only the presence of companions that can influence impulsive buying but that a tendency to be impulsive alone or with others exists. The social and non-social tendencies may be important considerations for research studies, as participants may exhibit different impulsive buying behaviours when they are shopping with other people or when they are shopping alone. These tendencies also appear to interact with other antecedents or factors across the phases of impulsive buying. For example, a consumer who exhibits a higher social tendency may behave differently when alone than a consumer who exhibits a higher non-social tendency. The interview findings also indicate that emotions exert a different influence on behaviour when consumers are alone or with others. Therefore, future research could misrepresent the role of, for example, positive emotions, if a consumer's social or non-social tendency is unknown.

One area of importance relating to the categorisations may arise when conducting field research into impulsive buying. For example, the social setting of any participants shopping experience may influence their behaviour and their results. Social influence may also moderate the role of other variables by affecting the way in which an impulsive buyer

shops. Therefore, it appears that measuring social influence in such a way as to capture the usual and current shopping habits of participants could provide more accurate results.

The current impulsive buying trait scales (e.g., Rook & Fisher, 1995) measure a general tendency towards impulsive buying through items that relate to the cognitive and affective aspects of impulsive buying behaviour. These scales measure a broad form of impulse buying because they do not take the social situation into account. For example, typical items from the Rook and Fisher (1995) *buying impulsiveness scale* (see: appendix 4) relate to the sudden desire to act associated with impulsive buying and the unreflective nature of impulsive buying which is central to making an impulsive purchase. For example, “I often buy things without thinking”; “I see it, I buy it” describes me”; and “I buy things according to how I feel at that moment”. None of the nine items in the *buying impulsiveness scale* refer to the social aspects of shopping, or the influence of potential shopping companions. The Weun, Jones and Beatty (1998) *impulse buying tendency scale* also contains general statements relating to general impulsivity and unreflectivity. For example, “I avoid buying things that are not on my shopping list”. As with the Rook and Fisher scale, the Weun, Jones and Beatty scale does not take into account any social elements of the impulsive buying process, or the influence of companions. The longer Verplanken and Herabadi (2001) scale, which separates trait impulsive buying into the cognitive and affective components, also relates to a general form of impulsive buying. For example, a typical item on the cognitive scale relates to the sudden desire to act and unplanned nature of impulsive buying, “I am used to buying things ‘on the spot’”. A typical item on the affective scale refers to the psychological conflict and struggle associated with impulsive buying (Rook & Hoch, 1985), “it is a struggle to leave nice things I see in a shop”.

As existing scales of trait impulsive measure do not take the social situation into account they may not accurately capture a consumer’s impulsive behaviour. The interview

analysis suggested that consumers' impulsive buying habits may be situated in a social context. Consequently, more specific social impulsive buying tendency items will allow researchers to capture a consumer's full range impulsive buying habits in both social and individual shopping contexts.

4.10 Summary

Analysis of the interview data suggested that impulsive buyers may be categorised as exhibiting social or non-social impulsive buying tendencies. The analysis also suggested that there is considerable interaction between social and emotional factors across the impulsive buying process. The social and non-social tendencies may influence how consumers behave in different situations but also how personal or contextual antecedents affect their behaviour. Emotional and social factors may moderate enjoyment and interact to influence outcomes.

A particular implication of the interview findings is that further research would benefit from measures which distinguish between social and individual forms of impulsive buying behaviours. Development of such measures would also enable further investigation of whether this distinction represents important inter-individual differences in behaviour and whether these different forms of impulsive buying have different antecedents and consequences. Such a measure may be of use in field studies, where it can efficiently be used to capture how impulsive buyers usually behave. If a study does not measure the tendency of the participants to be impulsive alone or with others, then potentially important relationships may be missed. For example, future study results may unknowingly reflect how social impulsive buying participants behave when alone rather than with others. It is not sufficient to measure only if a person is alone or with others, as their usual tendency to be impulsive in these different social scenarios may affect how they behave. Knowing that a participant is shopping alone does not provide adequate information if a researcher does

not know that the participant tends to be impulsive with others. Furthermore, emotional antecedents may affect social and non-social impulsive buyers differently depending on the situation. Therefore, it will be beneficial to researchers to have a scale to measure how impulsive buyers behave in social situations, or while shopping alone.

5. Chapter five: Scale development- refinement and validation

Data collection stage two

5.1 Introduction

The results of the stage one qualitative study reported in the previous chapter indicated that the impulsive buying tendency may differ across social or individual shopping situations. Consequently, I began a process of scale development which resulted in two five item scales measuring social and non-social impulsive buying tendencies. Following the best practice advice discussed in chapter three, I used a two phase process to develop these scales. Phase one involved the creation of an item pool with 40 items which was reduced to 31 items after a small pilot. I then tested the internal validity and inter-item correlations of these 31 items using exploratory factor analysis on a sample of 199 participants. In phase two, I tested 23 of the initial 31 items on a larger sample of 415 consumers. These 23 items were subjected to confirmatory factor analysis to further test the internal validity and expand the analysis to explore convergent and discriminant validity. In both phases the *buying impulsiveness scale* was included as an anchor scale.

In this chapter I first discuss the results of scale development phase one which provided initial support for the use of the scales. In phase one, both the social and non-social scales demonstrated adequate model fit and exhibited significant correlations with the *buying impulsiveness scale*. I describe the process of item elimination, which resulted in retaining 23 items for phase two. I then discuss phase two of the scale development, in which I explored the nomological network of the scales. Accordingly, I discuss the correlations between the newly developed scales, the Big-Five personality facets and general impulsivity. Both the social and non-social impulsive buying tendency scales demonstrated good internal reliability, and expected convergent and discriminate properties within the nomological

network. The results of both data collection phases provide evidence that the impulsive buying tendency differs depending on the social context. To close the chapter I provide a brief discussion of the results, and I discuss the results further in chapter seven.

5.1.1 *Pilot of items*

I discuss the full process of developing the pilot items and the scale format in the *methods* chapter. To briefly summarise the detail of this process, I used existing scales of impulsive buying (e.g., Rook & Fisher, 1995) and the social and non-social impulsive buying conceptualisations as a base from which to develop social and non-social scales of the impulsive buying tendency (see: appendices 3a and 3b for tables of item provenance). I selected a five item Likert scale format, using an “agree” to “disagree” response format. Following the process I described in the *method*, I conducted a pilot to test item wording and participant understanding of the initial 40 item pool. In table 5.1 there is a list of all 40 items from the item pool, and I have identified at which stage the items were removed; leading to the final five social items and five non-social items. I recruited ten participants (M=4, F=6) using convenience sampling and interviewed them in a one-on-one setting. The participants were asked to highlight confusing or repetitive items and we discussed these notes during the interview. Following the pilot it was clear that a number of the items were redundant or confusing and should be considered for removal. Therefore, I revisited the construct conceptualisations alongside the problem items to ensure the item pool did not become too narrow as a result of item removal (Clark & Watson, 1995). I retained items which were related to the constructs even if they were broader than the concepts suggested. Accordingly, I only removed problem items at the initial stage if item wording could not be fixed, or if the item was redundant. For example, I originally had a number of items relating to behaviour changes between social and non-social shopping, e.g., “My usual behaviour changes when I shop with other people”. However, the pilot participants felt that this item implied non-social shopping was the norm and forced a response which may not reflect their behaviour.

Table 5.1: Item pool

<i>Social tendency items</i>	<i>Non-social tendency items</i>
<i>Final items</i>	
<i>S-IB2-</i> When I go shopping with other people I buy things that I had not intended to purchase	<i>NS-IB1-</i> I am more spontaneous when shopping alone
<i>S-IB6-</i> Shopping with others can lead to buying items without thinking	<i>NS-IB4-</i> Spur-of-the-moment purchases tend to happen when I am alone
<i>S-IB8-</i> I end up making more rash purchases if I am out with other people	<i>NS-IB5-</i> I feel more comfortable buying items I haven't planned to buy when I am alone
<i>S-IB9-</i> I tend to be a bit reckless if I shop with other people	<i>NS-IB6-</i> A trip to the shops results in more spontaneous purchases if I am alone
<i>S-IB12-</i> My shopping with other people tends to be more spur-of-the-moment	<i>NS-IB7-</i> Shopping alone leads to more unplanned purchasing
<i>Items removed after phase two analysis</i>	
<i>S-IB1-</i> When shopping with others I tend to buy spontaneously	<i>NS-IB2-</i> I will be more reckless when shopping alone
<i>S-IB3-</i> Most of my unplanned purchasing happens when I shop with other people	<i>NS-IB9-</i> I tend to be more controlled with my purchasing when I shop on my own
<i>S-IB4-</i> "Just do it" describes me when shopping with other people	<i>NS-IB10-</i> I will carefully plan what I am going to buy if I will be shopping alone
<i>S-IB5-</i> I buy more spur-of-the-moment items if I am shopping with other people	<i>NS-IB11-</i> When I shop alone I will be considered with my purchasing
<i>S-IB14-</i> If I go shopping with others I purchase fewer unplanned items	<i>NS-IB12-</i> I stick to a plan when shopping alone
<i>S-IB151-</i> When shopping with other people I will stick more to a plan	<i>NS-IB13-</i> I avoid buying unplanned items when I go to the shops by myself
<i>S-IB16-</i> I am more cautious when shopping with others	
<i>Items removed after phase one analysis</i>	
<i>S-IB7-</i> I have bought nice things to cheer myself up when shopping with others	<i>NS-IB3-</i> If I shop alone I can be myself
<i>S-IB10-</i> I sometimes regret purchases I make after shopping with others	<i>NS-IB8-</i> I sometimes regret unplanned purchases I have made when shopping alone
<i>S-IB11-</i> If I am shopping with others I tend to be in a good mood	<i>NS-IB14-</i> Shopping alone in a bad mood can lead to buying items without thinking
<i>S-IB13-</i> I don't like buying items to cheer myself up if I am with other people	<i>NS-IB15-</i> If I want to buy something to cheer myself up I prefer to be alone
<i>Items removed after pilot*</i>	
Shopping is more fun with other people than alone	I shop differently when alone than when I am with other people
My usual behaviour changes when I shop with other people	I am cautious with what I buy when I shop alone than with others
I regret more purchases that I make after shopping with other people	I stick with a plan more when I am shopping by myself
Shopping is more fun with other people than alone	I don't like shopping by myself compared with shopping with others
Shopping with others is a more positive experience than by myself	I prefer to be spontaneous when shopping with other people rather than alone

*The piloting flagged that many of these items do not classify as "social" or "non-social", which is partly the reason for their removal before the study.

The full pilot process resulted in the removal of nine items, leaving 31 items in the final item pool (see: table 5.1 and appendix 3c). I reviewed the 31 items with my supervisors prior to collecting data.

5.1.2 Research question: update

Following the first stage of data collection I updated the research question by adding two sub-questions. The first sub-question stemmed from the interview participants describing impulsive buying as varying in social or non-social situations. Consequently, sub-question I is about the potential for impulsive behaviour to change across situation. The second sub-question relates to my interview data analysis which suggested that the participants exhibited preferences towards the situational forms of impulsive buying. Accordingly, sub-question II is about different behavioural traits between different individuals. I address the question of how the situation and trait interact in the final study, which I discuss in chapter six.

Sub-question I: Do individuals exhibit different impulsive buying tendencies that are then most likely to be displayed in social situations for some individuals and non-social situations for others?

Sub-question II: Can social and non-social forms of the impulsive buying tendency be measured by a psychometric scale?

5.2 Data collection phase one: refinement and initial validation

5.2.1 Hypotheses

These hypotheses emerged from my analysis of the interview data and the conceptualisation of the social and non-social constructs. As I discussed in the previous chapter, the interview participants discussed the situational elements to their impulsive buying. The participants appeared to differ in the extent to which they had a preference for social or non-social impulsive buying. Consequently, I conceptualised social and non-social forms of impulsive buying.

The social form of the impulsive buying tendency was described by the participants who were mainly impulsive when shopping alone. These social impulsive buyers described the social aspects of shopping as encouraging more impulsivity, whereas the non-social impulsive buyers described being more impulsive when shopping alone. Given the participants discussed the importance of the social setting for their impulsive buying, I conceptualised the social and non-social impulsive buying as potential behavioural tendencies. Therefore, the hypotheses relate to the potential social and non-social types of impulsive buying and their relationships with the general impulsive buying tendency.

H1: The impulsive buying tendency may be separated into two distinct factors of impulsive buying related to social situation, namely: (a) social, and (b) non-social forms of trait impulsive buying.

H2: The factors of (a) social and (b) non-social trait impulsive buying will positively correlate with the general form of trait impulsive buying

5.2.2 Method

5.2.2.a Participants

I recruited the phase one participants through convenience sampling at the Open University. The participants were drawn from a cross section of Open-University staff and postgraduate students (undergraduate students from the University were not sampled). Avoiding undergraduate students avoided a common problem with convenience sampling that is present in impulsive buying research. Furthermore, the sample showed a good mix of different age ranges. 304 participants responded to University-wide advertisements for participants in a research study. 112 of the initial responses were incomplete leaving 206 valid cases. After the initial analysis I removed seven cases, leaving a phase one sample of 199 responses comprising 44 males and 155 females (see: table 5.2). The implications of the unbalanced sample are examined in stage five of the analysis.

Table 5.2: Phase one demographics of valid responses

Demographic information	Valid responses (199)	
	<i>n</i>	%
Gender		
Female	155	77.9
Male	44	22.1
Did not answer	-	-
Age		
18-24	2	1.9
25-34	30	27.8
35-44	36	33.3
45-54	26	24.1
55-64	14	13.0
65+	-	-

5.2.2.b Materials

5.2.2.b.i Existing materials

Buying impulsiveness scale (Rook and Fisher, 1995)

This nine item scale (see: appendix four) contains statements related to impulsive buying e.g. “I often buy things spontaneously.” Respondents rate the extent to which they agree with the statements on a five item Likert scale from 1-5, strongly disagree to strongly agree with a range of 9-45. The phase one sample reported a mean of 26.96 (s.d. =6.47) and the scale showed good internal consistency ($\alpha=.87$).

5.2.2.b.ii New materials

Social and non-social impulsive buying items

The social and non-social trait impulsive buying items are a series of statements relating to social and non-social aspects of impulsive buying. The social items relate to social aspects of impulsive buying, e.g., “Shopping with others can lead to buying items without thinking”. The non-social items relate to non-social aspects of impulsive buying, e.g., “A trip to the shops results in more spontaneous purchases if I am alone” (see: table 5.1). Respondents rate the extent to which they agree or disagree with the statements using a five-item Likert rating scale.

5.2.2.c *Procedure*

I placed advertisements on social media (twitter and Facebook) and internal Open University webpages, these channels were used to broaden the participant pool. The adverts requested participants for Ph.D. research relating to consumer shopping behaviour and included a link to a survey webpage hosting the scale items and the *buying impulsiveness scale* (Rook & Fisher, 1995). The webpage contained full information about the survey and data handling procedures. Participants were provided with an information sheet (see: appendix five) providing full details of how their data would be used, including potential publication and use in the Ph.D. research project. The information sheet also included contact details and participants were informed that their data would be fully confidential and anonymous. Participants confirmed their age and gender, and then completed the *buying impulsiveness scale* (Rook & Fisher, 1995) and the social and non-social impulsive buying tendency items. The social and non-social items were mixed with the *buying impulsiveness scale* items to avoid validity issues arising from the proximity of similar items. The entire process took approximately 10 minutes to complete. After completion of the scale, the participants were thanked for their time and provided with a unique identifying code. The participants were informed they could use this code if they wished to withdraw consent. All data were completely anonymous and the only form of identification was the code provided to each participant. No participants requested their data to be withdrawn.

5.2.3 *Phase one analysis approach*

In phase one, I used exploratory factor analysis to uncover the underlying factor structure and reduce the item pool. In all of the phase one analysis I used the 199 cases from the phase one sample. Exploratory factor analysis enables the exploration of possible measurement and structural models to identify the underlying factor structure (Childs, 1990). Confirmatory factor analysis is used to verify the structure based on theory and existing evidence, e.g., gathered through exploratory factor analysis (Childs, 1990). As I had a

relatively small sample, I was not able to perform confirmatory factor analysis on the models from phase one; instead confirmatory factor analysis was performed on a separate sample during phase two. Consequently, in phase one I used exploratory factor analysis to identify the underlying structure and generate models by switching between items. The phase one analysis involved a technique typically used for confirmatory factor analysis; however, this analysis was exploratory in nature as I discuss in further detail on page 157. The phase one analysis was completed in five steps. In the first step, I started the item purification process by assessing the unidimensionality of the scales and reduced the item pool through exploratory factor analysis (Arnold & Reynolds, 2003). In the second step, I refined the item pool further by generating three different measurement models to determine the item-construct correlations. I then tested the unidimensionality and internal reliability of these three models in the third step. Next, I tested the convergent validity of the three measurement models in the fourth step and created models using the social, non-social and *buying impulsiveness scales* (Rook and Fisher, 1995). In the fifth step, I selected one measurement model from the three models tested in steps two, three and four. This resulted in the selection of a measurement model with a five item scale measuring social impulsive buying, and a five item scale measuring non-social impulsive buying. I then investigated the role of gender and explored the correlation between the social and non-social impulsive buying scales. See appendix six for expanded scale development phase one analysis, including models of all measurement and social, non-social and *buying impulsiveness scale* models.

5.2.4 Results

Step one- Initial refinement and purification of item pool

I first explored the data for problem data, which resulted in the removal of three cases. I only removed outliers where they were clearly a result of measurement error, e.g., where the participant had recorded extreme repeated values across all items on scales. Next, I examined the dataset for item distributions. The analysis indicated that skewness values

were moderately non-normal for all of the items and all items exhibited values less than ± 1.0 . The values were moderately non-normal for kurtosis, although two of the items showed values slightly greater than ± 1.0 . The conceptualisation of the two tendencies suggested that consumers would exhibit a strong preference for either social or non-social impulsive buying. Therefore, I expected that kurtosis would be more prevalent than skewness. None of the items exhibited severe non-normality and it was important to retain items with a broad range of distributions (Clark & Watson, 1995), no items were removed at this stage.

Following the exploration of the item distribution, the 31 items of the social and non-social impulsive buying tendencies were subjected to maximum likelihood exploratory factor analysis. The data were first examined for inter-item correlations and suitability for conducting factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was .89 exceeding the value of .6 recommended by Kaiser (1974). Bartlett's test of Sphericity (Tobias & Carlson, 1969) was also significant ($p=.000$) and factor analysis was appropriate. The correlation matrix was inspected for multiple inter-item correlations greater than .3. Two items (NS-IB7 and S-IB14) exhibited low inter-item correlations and showed only two correlations $>.3$ and were removed from the analysis. The analysis was run again with 29 items and six factors were extracted with eigenvalues exceeding 1. These factors accounted for 67.12% of the variance, and the scree plot indicated a break after four factors. The communalities indicated that two items (S-IB11, 13 & NS-IB8) had loadings of less than .35 and these items were removed. Following the removal of these items, a four factor solution was extracted accounting for 63.4% of the variance. The factor matrix and communalities were examined and two items (S-IB10 & NS-IB15) had low communalities and were loading onto multiple factors. Furthermore, the fourth factor was accounted for by the same two items (NS-IB3 & NS-IB10) and the third and fourth factors accounted for just 8.3% of the cumulative variance. Therefore, the four items (S-IB10 & NS-IB3, 10 & 15)

were removed, resulting in a three factor solution accounting for 63.66% of the variance. Just two items loaded onto factor three (NS-IB11 & 12) indicating that the majority of the items formed a two factor solution. The two items loading onto factor three (which accounted for just 4.6% of the variance) were removed leaving 20 items. The first factor appeared to represent items relating to social impulsive buying and the second factor the items appeared to relate to non-social impulsive buying items. However, the third factor included negatively worded social and non-social impulsive buying items; suggesting that the negatively worded items were forming a separate factor.

To explore the factor structure further, the analysis was set to rotate the solution using direct oblimin rotation. Rotation attempts to achieve a simple structure by rotating the factors (e.g., Bryant & Yarnold, 1995), therefore simplifying the analysis for interpretation. Given that two of the factors appeared to represent social and non-social impulsive buying, simplifying the factor structure enabled to me to examine the third factor for problem items. As oblique rotation methods assume the factors are correlated, I used direct oblimin which is a type of oblique rotation (Gorsuch, 1988). The rotated solution extracted three factors accounting for 65.55% of the variance. The rotated solution indicated that three items (S-IB13, 14 & 15) loaded onto factor three. Furthermore, one of the other items (NS-IB13) showed communalities of less than .3 and was, therefore, removed. Accordingly, four items were removed and the resulting 16 items formed a two factor solution accounting for 65.3% of the variance. Nine items formed the social impulsive buying tendency factor (S-IB) and seven items formed the non-social impulsive buying tendency factor (NS-IB) (see: table 5.3)

Step two: Identification and refinement of measurement models

The results of the step one analysis indicated that 16 items of the original 31 items formed a two factor solution. To assess the pool further and identify potential measurement models, I subjected all of the original 31 items to further exploratory factor analysis.

Table 5.3: Pattern and structure matrix with oblimin rotation of two factor solution of social (S-IB) and non-social (NS-IB) items

Item	α	Pattern coefficients		Structure coefficients		Communalities
		Factor 1	Factor 2	Factor 1	Factor 2	
<i>Factor 1- Social impulsive buying (S-IB)</i>	.93					
S-IB6-Shopping with others can lead to buying items without thinking		.817	.195	.754	-.066	.603
S-IB9-I tend to be a bit reckless if I shop with other people		.802	.115	.765	-.142	.597
S-IB5 -I buy more spur-of-the-moment items if I am shopping with other people		.802	-.177	.858	-.433	.765
S-IB2-When I go shopping with other people I buy things that I had not intended to purchase		.787	-.002	.788	-.253	.621
S-IB8-I end up making more rash purchases if I am out with other people		.766	-.060	.785	-.305	.620
S-IB1-When shopping with others I tend to buy spontaneously		.755	-.082	.781	-.323	.616
S-IB12-My shopping with other people tends to be more spur-of-the-moment		.747	-.071	.770	-.310	.598
S-IB3-Most of my unplanned purchasing happens when I shop with other people		.688	-.325	.792	-.545	.722
S-IB4-"Just do it" describes me when shopping with other people		.686	.028	.677	-.191	.460
<i>Factor 2- Non-social impulsive buying (NS-IBT)</i>	.90					
NS-IB7-Shopping alone leads to more unplanned purchasing		.134	.940	-.167	.897	.821
NS-IB6- A trip to the shops results in more spontaneous purchases if I am alone		.121	.934	-.178	.896	.815
NS-IB4-Spur-of-the-moment purchases tend to happen when I am alone		-.059	.724	-.290	.743	.555
NS-IB2- I will be more reckless when shopping alone		-.073	.696	-.295	.719	.522
NS-IB1-I am more spontaneous when shopping alone		-.160	.683	-.378	.734	.562
NS-IB5-I feel more comfortable buying items I haven't planned to buy when I am alone		.015	.669	-.199	.664	.441
NS-IB9-I tend to be more controlled with my purchasing when I shop on my own		-.059	.553	-.235	.572	.330

Although the further exploratory factor analysis in phase one involved a method typically used for confirmatory factor analysis, the analysis was still exploratory in nature. During the phase one exploratory factor analysis I did not test a particular hypothesis or factor structure, but rather generated a number of potential measurement models and tested potential item fit. Therefore, none of the phase one analysis can be regarded as confirmatory factor analysis testing.

The result of the maximum likelihood analysis indicated that the 31 item model was a poor fit. The chi square was significant, $\chi^2 (1351.266) = 433$, and at over three times the degrees of freedom. The comparative fit index (CFI=.727) and Tucker Lewis index (TLI=.707) were well below exceeding the .9 to .95 values that are considered representative of good fit (Bentler, 1990; Bentler, 1992; Hu & Bentler, 1999). Furthermore, the root mean square error of approximation (RMSEA=.103) represented poor fit.

Given the poor fit of the initial measurement model, I explored the item-construct correlations, residuals and modification indices and identified a number of items showing low loadings or high cross factor loadings. I then began a process of model generation using the information from the covariance matrices and modification indices (e.g., Jöreskog, 1993; Kline, 1998). This model generation process resulted in a number of models providing reasonable to good fit for the data. A summary of the fit and reliability of these models is provided in table 5.4. In the three models, the social and non-social constructs were measured by either five or six item scales. All three models showed similar fit (reasonable to good) and the correlation between the social and non-social constructs was negative. I examine this negative correlation between the social and non-social constructs in detail in step four.

Step three: unidimensionality and reliability

I next explored the unidimensionality of the social and non-social scales. Unidimensionality refers to the extent to which scale items measure a single underlying

factor (e.g., Anderson & Gerbing, 1988; Clark & Watson, 1995). I computed the average variance extracted (AVE) for the target constructs and *buying impulsiveness scale*. The average variance extracted represents the sum of the squared loadings for each construct and is the average variance explained among the items loading onto that construct. AVE values for each construct should exceed .50 (Fornell & Larcker, 1981). I also computed internal reliability estimates which refer to the internal consistency of a scale (Clark & Watson, 1995). The analysis of all three models (see: figure 5.1 for model one, appendix 6.1 for model two, and appendix 6.2 for model 3) revealed satisfactory unidimensionality for each scale and satisfactory reliability (see: table 5.4). AVE values ranged from .57 to .61, α ranged from .86 to .88, and composite reliabilities ranged from .87 to .89. I discuss the selection of one of these models in step five.

Step four: Convergent and discriminant validity

The conceptualisation of the social and non-social constructs indicated that they should be related to the general impulsive buying tendency (convergent validity). However, given the constructs were intended to measure a new facet of impulsive buying, they were also expected to demonstrate unique variance (discriminant validity). I explored the convergent and discriminant validity of the scales by creating a model with the three social and non-social measurement models (see: table 5.4) and the *buying impulsiveness scale* (Rook & Fisher, 1995).

I also examined the correlations between the social and non-social scales and the *buying impulsiveness scale* to determine the shared variance along with the squared interconstruct correlations (SIC). The squared interconstruct correlations represent the squared correlations between the target construct scales and *buying impulsiveness scale*

Table 5.4: Summary of measurement model fit

Model	Inter-construct correlation ^a	Item-construct correlations	Model fit	AVE (average variance extracted)	α	Construct reliability
<i>Model one</i>	-.19		$\chi^2(82.211)=34$, Chi sq/df = 2.418, p <.0001, CFI=.955, TLI=.945, RMSEA=.085			
S-IB scale (5 item)		.73, .75, .82, .79, .80		.61	.88	.88
NS-IB scale (5 item)		.93, .72, .64, .91, .53		.59	.86	.87
<i>Model two</i>	-.25		$\chi^2(97.696)=34$, Chi sq/df = 2.873 p <.0001, CFI=.939, TLI=.919, RMSEA=.097			
S-IB scale (5 item)		.80, .69, .73, .77, .77		.57	.86	.86
NS-IB scale (5 item)		.92, .68, .71, .92, .55		.59	.87	.87
<i>Model three</i>	-.29		$\chi^2(141.665)= 53$, Chi sq/df = 2.673 p <.0001, CFI=.933, TLI=.917, RMSEA=.092			
S-IB scale (6 item)		.74, .75, .83, .78, .78, .68		.58	.89	.89
NS-IB scale (6 item)		.91, .73, .66, .91, .69, .55		.57	.86	.87

^a non-social impulsive buying – social impulsive buying correlation

In order to demonstrate discriminant validity from a related construct, the average variance extracted (AVE) values for the target constructs should be greater than the squared interconstruct correlations. If the AVE is not larger than the SIC it indicates that the items measuring the target construct (i.e., social or non-social impulsive buying) may have more in common with the related construct (i.e., *buying impulsiveness*) than the target construct itself.

Prior to the analysis of the measurement model fit with the *buying impulsiveness scale*, I performed confirmatory factor analysis on the nine-item model specified by Rook and Fisher (1995). The results of the analysis indicated that the model provided reasonable to good fit, $\chi^2 (53.372) =$, $p < .05$, CFI=.962, TLI=.950, RMSEA=.69. The fit of the *buying impulsiveness scale* was similar to that reported by Rook and Fisher and the nine-item model was used with no modifications. Next, I created three larger models using the three measurement models identified in step two (see: table 5.4) and the nine-item *buying impulsiveness scale*. A summary of the analysis of all three models is provided in table 5.5. All three models showed reasonable fit, and in all three models the social and non-social constructs showed moderate correlations with the *buying impulsiveness scale* (see: appendix 6.3 for model one, appendix 6.4 for two, and appendix 6.5 for model three). This indicated that the target constructs demonstrated convergent validity with the general impulsive buying tendency. Furthermore, the AVE figures for the social and non-social constructs exceeded the recommended value of .50 (Fornell & Larcker, 1981) and were greater than the SIC values. This indicated that the target constructs demonstrated discriminant properties from the general impulsive buying tendency.

Step five: Gender influence and the inter-construct correlation

I selected measurement model one (see: figure 5.1) to explore gender influence and analyse the negative social and non-social inter-construct correlation.

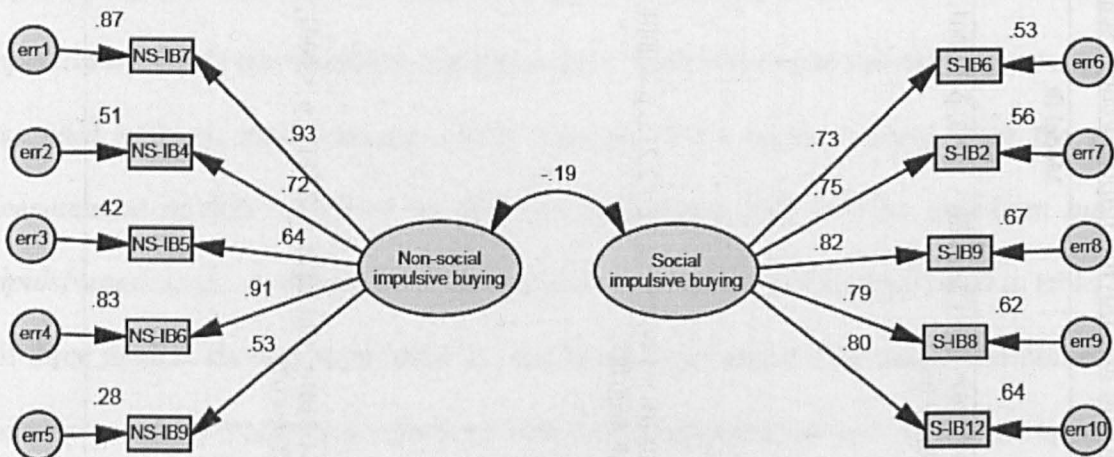
Table 5.5: Summary of model fit with social, non-social and buying impulsiveness scales (see: appendices 6.3, 6.4 and 6.5 for model diagrams)

Model	Target-construct to <i>buying impulsiveness</i> correlation	Model fit	AVE (average variance extracted)	SIC (squared interconstruct correlations)
<i>Model one</i>		$\chi^2(290.806)=149$, Chi sq/df = 1.952, p <.0001, CFI=.925, TLI=.914, RMSEA=.069		
S-IB (5 item)	.41		.60	.0320, .1657
NS-IB (5 item)	.38		.58	.0320, .1459
<i>Buying impulsiveness scale</i>	N/A		.45	.1459, .1657
<i>Model two</i>		$\chi^2(330.101)=149$, Chi sq/df = 2.215, p <.0001, CFI=.905, TLI=.891, RMSEA=.078		
S-IB scale (5 item)	.43		.56	.0420, .1814
NS-IB scale (5 item)	.39		.59	.0420, .1513
<i>Buying impulsiveness scale</i>	N/A		.44	.1513, .1814
<i>Model three</i>		$\chi^2(411.314)=$, Chi sq/df = 2.211, p <.0001, CFI=.898, TLI=.885, RMSEA=.078		
S-IB scale (6 item)	.45		.58	.0327, .2025
NS-IB scale (6 item)	.38		.60	.0327, .1436
<i>Buying impulsiveness scale</i>	N/A		.45	.1436, .2025

Following the advice of Clark and Watson (1995), I did not select the measurement based purely on the results of the factor analysis. I also reviewed the conceptualisation of the constructs along with the results of the exploratory factor analysis.

The five item social scale and five item non-social scale of measurement model one was used for all of the step five analysis. During this step, I explored the influence of gender on the social and non-social scales and examined the negative correlation between the constructs (I describe the analysis of the correlation between the constructs in detail in step six of phase two)

Figure 5.1: Measurement model one (n = 199)



Gender: I split the sample using gender as a grouping variable and explored the fit of model one. There are some inconsistent results concerning gender and impulsive buying, but gender has been reported as a significant influence on impulsive buying behaviour (e.g., Dittmar, Beattie and Friese, 1995). Therefore, it was important to determine if the scales were equally valid for both men and women. Measurement model one was subjected to maximum likelihood factor analysis with gender as a grouping variable. With the dataset split by gender the model provided reasonable fit for males ($\chi^2(53.864)=34$, $p < .05$, CFI=.938, TLI=.918, RMSEA=.117) and females ($\chi^2(82.263)=34$, $p < .0001$, CFI=.941, TLI=.922,

RMSEA=.096). The correlations between the social factor and the non-social factor were negative for both males (-.36) and females (-.20).

Correlation between constructs: I explored the negative correlation between the social and non-social constructs by splitting the sample by mean *buying impulsiveness* score. I performed this analysis to determine if the correlation between social and non-social impulsive buying was moderated by a consumer's general impulsive buying tendency. The split sample dataset was then used to test measurement model one identified in step three. The participants with a lower than sample mean *buying impulsiveness* tendency recorded a weak positive correlation (.10) between the social and non-social factors. However, the participants with a higher than sample mean *buying impulsiveness* tendency score recorded a strong negative correlation (-.6) between the social and non-social factors.

5.2.5 Phase one discussion

The results of the phase one analysis indicated that the 16 item refined item pool measured two factors via two negatively correlated scales. These factors were named "social impulsive buying" and "non-social impulsive buying". The analysis then revealed ten and 12 item measurement models, indicating that the developed items converged onto the two factors with moderate to strong correlations and supporting *H1a* and *b*. Consequently, the phase one analysis provided preliminary support for the sub- research question one; that the impulsive buying tendency differs across social contexts, and sub-question two that these tendencies can be measured by psychometric scales. The two scales showed a weak negative correlation suggesting that the participants tended to engage in one form of impulsive buying over the other. The analysis of this negative correlation indicated that when the sample was split by the mean general impulsive buying tendency (Rook & Fisher, 1995) the correlation changed direction. The group with a stronger than sample mean general impulsive buying tendency exhibited a negative correlation between the social and non-social constructs.

Whereas, the group with a weaker than sample mean general impulsive buying tendency exhibited a positive correlation between the social and non-social target constructs. This implies that people who engage in more impulsive buying may have a stronger tendency to be either social or non-social impulsive buyers. This finding aligns with the results of the pilot interviews, where the participants reported strong preferences for being social or non-social shoppers.

The analysis of convergent and discriminant validity also indicated that the social and non-social scales positively correlated with the *buying impulsiveness scale*, supporting *H2a* and *b*. In all three of the models I tested including the social, non-social and *buying impulsiveness scales* these correlations were moderate in strength. Therefore, the analysis suggested that the social and non-social constructs exhibit moderate shared variance with the general impulsive buying tendency. On inspection of the inter-construct correlations the analysis revealed that the new social and non-social items had more in common with the social or non-social constructs, than with the general impulsive buying tendency. Consequently, the scales demonstrated both convergent and discriminant validity. The convergent and discriminant validity with the general impulsive buying tendency indicated that that the social and non-social impulsive buying scales were measuring a facet of impulsive buying that was not captured by the general tendency. Consequently, the results indicated that the participants were able to better delineate their impulsive behaviour when offered the social or non-social items.

5.3 Data collection phase two: Validation and nomological network

The potential for the scales to measure a form of impulsive buying unexplained by the general tendency provided the impetus for the phase two. Phase one had resulted in a number of potential item combinations for the scales, and I planned phase two to test these models further. As discussed in chapter three, the process of selecting items for removal was

completed using both the original theoretical basis for the scales and the results of the phase one analysis. In particular, I followed the advice of Clark and Watson (1995) to avoid selecting only the best fitting items. The initial refinement had resulted in a reduced item pool of 16 items, and this was reduced to ten items for measurement model one (see: figure 5.1). I reviewed the phase one results alongside the theory and referred back to the initial pool of 31 items. I identified eight items, from the original 31 item pool, which appeared to be conceptually unrelated to the constructs. These eight items were broadly drawn and showed very low inter-item correlations in the analysis. Furthermore, the initial analysis revealed that they formed separate unrelated factors. I removed these eight items and retained the remaining 23 items for the phase two item pool. As the initial factor structure and scale items were derived through exploratory factor analysis, it was necessary to perform confirmatory factor analysis on a new sample during phase two.

As I discussed in the method, an important consideration for the phase two data collection was the inclusion of potentially related constructs to explore the nomological validity of the scale. Demonstrating nomological validity can be achieved by testing the convergent and discriminant validity of related constructs through correlational analysis. In phase one, I explored the relationship between the general impulsive buying tendency and the social and non-social factors, and the scales had demonstrated convergent and discriminant validity with the *buying impulsiveness scale*. To expand this analysis, I reviewed the nomological network of the scale for expected relationships. The general impulsive buying tendency has been found to correlate with a number of related constructs, e.g., Big-Five personality facets (e.g., Verplanken & Herabadi, 2001), mood management (Coley & Burgess, 2003), impulsiveness (Wuen, Jones & Beatty, 1998) and trait negative affect (Silvera, Lavack & Kropp, 2008). Based on my analysis of the interview data and the conceptualisations, I expected the social and non-social constructs to positively correlate

with general impulsiveness, personality facets and emotional antecedents. I reviewed psychometric scales for inclusion, with a particular focus on reliability and length. It was important to select relatively short scales as I was also asking the participants to complete the 23 items of the social and non-social scale, nine items of the *buying impulsiveness scale* and a number of demographic items.

The strong correlation between the conscientiousness and extraversion facets of the Big-Five and the general impulsive buying tendency (Verplanken & Herabadi, 2001) suggested a Big-Five measure should be included in phase two. As I discussed in the literature review, there is considerable inconsistency regarding the openness, agreeableness and neuroticism facets of the Big-Five. Therefore, phase two presented the opportunity to explore these correlations further and examine if the social factors were moderating any important effects. The role of affect discussed by the project interview participants indicated that affect was also a crucial part of the scales nomological network. For example, the social participants discussed the role of positive emotions during their social forms of impulsive buying. Consequently, there was additional support for the inclusion of a scale measuring some form of emotional stability. I reviewed a number of personality scales, but selected the shortened 50 item version of the 100 personality adjective markers (Goldberg, 1990) as the optimal trade-off between length and reliability. These 50 statements measure the facets of conscientiousness, extraversion, emotional stability (neuroticism), openness and imagination (intellect) derived from the international personal item pool (Goldberg et al, 2006). I also reviewed the 20 item version of this measure (Mini-IPIP; Brent et al, 2006), but the increased reliability of the longer version was the deciding factor. I then reviewed the stage one qualitative data and the construct conceptualisations to hypothesise relationships between the newly developed scales and the Big-Five.

The types of behaviour discussed by the social impulsive buyers during the interviews suggested that extraversion may be a factor in their behaviour. Furthermore, there is a strong correlation between socialising and extraversion (e.g., Ashton, Lee, & Paunonen, 2002). The adjectives used to describe extraversion (e.g., “outgoing” or “gregarious”) also suggested extraverted consumers may be more likely to engage in social forms of shopping. The facets of introversion also suggested that introverted consumers may be less outgoing with their shopping and impulsive buying habits. There is also evidence from the consumer behaviour literature that extraversion is related to social motives of shopping (Mooradian & Olver, 1996). Yet, social shopping may also offer a form of support for impulsive buyers, through opinion sharing or social browsing (e.g., Kang & Park-Poaps, 2012). Furthermore, introverts may use spending as a way to create excitement (Pirog & Roberts, 2007). A number of the non-social impulsive buyers also discussed enjoying socialising, but were rarely impulsive when shopping with others. Therefore, it wasn’t entirely clear in which direction extraversion would correlate with the social and non-social factors. Consequently, I expected extraversion to be a significant factor but did not predict a correlation direction.

The definitions of conscientiousness suggested that this construct would correlate with both social and non-social forms of impulsive buying behaviour. For example, Hogan (1986) defines conscientiousness as “prudence” and Tellegen (1982) defines it as “constraint”. There is also strong evidence of a negative relationship between conscientiousness and trait impulsive buying in the existing literature (e.g., Verplanken & Herabadi, 2001). Therefore, I predicted that lower conscientiousness would be strongly related to high social and non-social forms of the impulsive buying tendency. However, as I discussed in the literature review there is conflicting evidence concerning the facets of agreeableness and openness; the mixed evidence for these factors suggested that neither would be an especially strong variable in either the social or non-social constructs (e.g.,

Verplanken & Herabadi, 2001; Wong, Tu & Lin, 2010). The role of affect in the nomological network suggested that both the non-social and social factors of impulsive buying would be strongly affected by emotional antecedents. For example, both the social and non-social interview participants discussed negative emotions as potential cues for their impulsive buying. Previous research has reported neuroticism as both a significant (Bratko et al, 2013) and a non-significant factor (Verplanken & Herabadi, 2001) in the impulsive buying tendency. However, trait negative affect has been reported as a factor in the impulsive buying tendency (Silvera, Lavack & Kropp, 2008; Verplanken, Herabadi, Perry & Silvera, 2005). Therefore, I predicted that the general factor of emotional stability measured by the IPIP-five factor model would exhibit a significant negative correlation with both social and non-social impulsive buying.

The strong role of impulsivity for the general impulsive buying tendency indicated that behavioural impulsivity should be an important variable in the nomological network (e.g., Wuen, Jones, & Beatty, 1998). The types of behaviours discussed by both the social and non-social impulsive buyers during the interviews also implied that general impulsivity was an antecedent in both tendencies. Consequently, it was necessary to demonstrate that the social and non-social constructs are related to behavioural impulsivity. A 15 version of the Barratt impulsiveness scale was selected as it is relatively short but still demonstrates good measurement validity and internal reliability (Spinella, 2007). The Barratt scale also includes sub-scales measuring attentional, motor and non-planning impulsivity. These sub-scales were a useful addition to explore the role of impulsivity in impulsive buying in more detail. I predicted a significant positive correlation between the social and non-social factors and the overall Barratt impulsiveness scale. However, there is no current research relating to the attentional, motor or non-planning facets and I did not specify correlations for the sub-scales.

5.3.1 Hypotheses

Due to the addition of the Big-Five scale and the Barratt Impulsiveness scale, I tested four additional hypotheses during phase two alongside *H1* and *H2*. I also added *H1i* which reflected the confirmatory factor analysis of the specific model from phase one. In line with previous studies, I expected a negative correlation between both social and non-social impulsive buying and conscientiousness and emotional stability (e.g., Verplanken & Herabadi, 2001). I predicted extraversion to be a significant variable in both social and non-social impulsive buying but did not specify the direction of the correlation. Furthermore, I predicted the general facet of impulsivity would positively correlate with the social and non-social impulsive buying tendencies (e.g., Wuen, Jones & Beatty, 1998).

H1: The impulsive buying tendency may be separated into two distinct factors of impulsive buying related to social situation, namely: (a) social, and (b) non-social forms of impulsive buying.

H1i: The five item social impulsive buying scale and five item non-social impulsive buying scale measurement model one from phase one will fit the phase two data.

H2: The factors of (a) social and (b) non-social impulsive buying will positively correlate with the general impulsive buying tendency.

H3: There will be a negative correlation between conscientious and the (a) social and (b) non-social factors.

H4: There will be a negative correlation between emotional stability and the (a) social and (b) non-social factors.

H5: There will be a significant correlation between extraversion and the (a) social and (b) non-social factors.

H6: There will be a positive correlation between the Barratt impulsiveness scale and the (a) social and (b) non-social factors.

5.3.2 Method

5.3.2.a Participants

I recruited participants through Qualtrics panel management service. 722 questionnaires were submitted, of which 307 were removed due to incomplete or problem data (discussed below). Therefore, 415 participants comprising 203 males and 212 females formed the phase two sample. These participants were all based in the United States and the full demographics of the sample are reported in table 5.6 (I discuss the implications of the U.S based sample in the *limitations* section: 7.5). As discussed in the *methods* chapter, I did not specify any characteristics for the sample

Table 5.6: Phase two demographics of valid responses

Demographic information	<i>n</i>	%
Gender		
Female	212	51.1
Male	203	48.9
Prefer not to answer	-	-
Age		
18-24	8	1.9
25-34	39	9.4
35-44	75	18.1
45-54	101	24.3
55-64	130	31.3
65+	62	14.9
Education		
Less than high school	5	1.2
High school/GED	97	23.4
Some college	124	29.9
2-year college degree	53	12.8
4-year college degree	99	23.9
Master's degree	33	8
Doctoral degree	1	.2
Professional degree (JD, MD)	3	.7
Income		
Below \$20,000	95	22.9
\$20,000-\$29,999	51	12.3
\$30,000 - \$39,999	49	11.8
\$40,000 - \$49,999	37	8.9
\$50,000 - \$59,999	55	13.3
\$60,000 - \$69,999	38	9.2
\$70,000 - \$79,999	13	3.1
\$80,000 - \$89,999	45	10.8
\$90,000 or more	23	5.5
Prefer not to answer	9	2.2

5.3.2.b Materials

Buying impulsiveness scale (Rook and Fisher, 1995)

This nine item scale includes nine statements related to impulsive buying e.g., “I often buy things spontaneously” (see: appendix four). Respondents rate the extent to which they agree with the statements on a five item Likert scale from 1-5, strongly disagree to strongly agree with a range of 9-45. The scale showed good internal consistency in phase two ($\alpha=.91$)

Social and non-social impulsive buying

The phase two analysis revealed a measurement model (see: figure 5.2) with five items loading onto the social scale and five items loading onto the non-social scale. The social scale includes statements related to social impulsive buying, e.g., “I end up making more rash purchases if I am out with other people”. The non-social scale includes statements related to non-social impulsive buying, e.g., “A trip to the shops results in more spontaneous purchases if I am alone”. Respondents rate the extent to which they agree with the ten statements on a five item Likert scale from 1-5, strongly disagree to strongly agree. Each scale has a range of 5-25, with a higher score representing higher impulsivity. In phase two, the scales exhibited a weak positive correlation (.20) and both scales showed good internal consistency; social ($\alpha=.89$), non-social ($\alpha=.90$)

Big-Five Personality facets (IPIP: Goldberg et al, 2006)

This 50 item scale (see: appendix seven) measures the Big-Five personality facets of extraversion, agreeableness, conscientiousness, emotional stability and imagination (intellect). Each facet is measured by a 10 item scale of ten statements, rated on a five point Likert scale, from very inaccurate to very accurate. Typical statements include “Am the life of the party” (extraversion) and “Am interested in people” (agreeableness). Respondents describe themselves as they are now and not as they wish to be in the future. The scales

showed good internal reliability, extraversion ($\alpha=.90$), agreeableness ($\alpha=.84$), conscientiousness ($\alpha=.82$), emotional stability ($\alpha=.92$) and imagination/intellect ($\alpha=.80$).

Shortened Barratt impulsiveness scale (Spinella, 2007)

The shortened Barratt impulsiveness scale (see: appendix seven) includes 15 items measuring three sub-factors of general impulsiveness each measured by five statements. These are motor impulsivity, attention and non-planning. Respondents rate themselves on a four point Likert scale from rarely/never to almost always/always. Typical statements include “I plan tasks carefully” (planning) and “I am a careful thinker” (attention). The overall scale ($\alpha=.82$) and sub-scales showed good or acceptable internal reliability, motor-impulsivity ($\alpha=.85$), non-planning ($\alpha=.81$) and attention ($\alpha=.71$).

5.3.2.c Procedure

Qualtrics panel management service collected the data from the 415 participants and collated it onto a survey homepage I used to download the results. The participants completed demographic questions followed by the social and non-social impulsive buying items mixed with the *buying impulsiveness scale* items. The participants also completed the Big-Five items (Goldberg et al, 2006) and the Barratt impulsiveness scale (Spinella, 2007). As the data collection was handled by Qualtrics all responses were completely anonymised using their in-house protocols and no identifying information was collected. Participants were informed of their right to withdraw and that the data was being collected only for educational purposes to explore consumer behaviour. Participants were thanked for their time at the end of the process, which took approximately 10 minutes.

5.3.3 Phase two analysis approach

The analysis of the phase two data followed six steps. Firstly, I completed exploratory factor analysis of the phase one measurement model (see: figure 5.1) using half of the phase two sample (the training sample). I then refined the model and subjected this to

confirmatory factor analysis using the remaining half of the phase two sample (the holdout sample). I also analysed the refined model using the combined training and holdout samples. I performed the same analysis on the alternative measurement models identified in tables 5.4 and 5.5. In the second step, I tested the unidimensionality and internal reliability of the three measurement models. During this step I selected measurement model one for further testing. In the third step, I created a model with measurement model one and the *buying impulsiveness scale*. I examined the convergent validity of the scales in this step and tested the model including the *buying impulsiveness scale*. During this step, I used the full phase two sample ($n = 415$), and the combined samples from phase one and two ($n = 614$) for analysis. In the fourth step, I explored the nomological network by examining the correlations between the social and non-social scales, and the FFM and the Barratt Impulsiveness scale. In the fifth step, I used gender as a grouping variable in a correlation with the target constructs. Finally, the sixth step involved splitting the sample by the *buying impulsiveness scale* score to examine the correlation between the social impulsive buying and non-social impulsive buying constructs. See appendix eight for measurement models and the social, non-social and *buying impulsiveness scale* model from the full 614 cases of phase one and two.

5.3.4 Results

Step one: Factor analysis and model refinement

The data were first explored for missing values and extreme outliers. Of the 722 cases, 305 were removed due to missing data or incorrect responses to a “check” item included to measure inattention. Two of the remaining 417 cases had extreme outliers when the item distributions were explored in SPSS. As with phase one, I only removed outlying data where I judged them to be a result of measurement error. These two cases were removed due to repeated extreme values across all of the impulsive buying tendency and personality variables, which indicated that the participants had reported extreme scores on

all items. The analysis of the social and non-social item distribution revealed that skewness values were moderately non-normal and all items exhibited values less than ± 1.0 . Kurtosis values were moderately non-normal, and one item exhibited a value slightly exceeding ± 1.0 . As discussed in the phase one analysis it was important to retain items with a broad range of distributions (Clark & Watson, 1995). As no items exhibited severe non-normality I did not remove any items. Following this preliminary analysis, I split the dataset of 415 cases into two samples. The dataset was split using SPSS “select cases” with a random sample of cases selected. This was performed on 50% of the file, assigning 208 cases into one sample and 207 into the other. The 208 cases formed the “training sample” for the initial analysis and the 207 cases formed the “holdout sample” for confirmatory factor analysis.

After splitting the file, I subjected measurement model one (see: figure 5.1) to confirmatory factor analysis on the training sample. The results of the CFA indicated that the ten item model provided a good fit to the data, the chi square was significant but at just over two times the degrees of freedom $\chi^2(70.78)=34$, $p<.0001$, and the CFI=.963, and TLI=.952 indicated good fit. The RMSEA=.072, however, indicated mediocre fit. The social and non-social factors showed a weak positive correlation of .22 and all five social impulsive buying items showed strong correlations with the social construct (.73 to .84). However, one of the non-social impulsive buying items showed a weak correlation (.31) with the non-social construct, while the remaining four items exhibited at least moderate correlations (.54 to .90). I examined the modification indices, but no significant changes were indicated. Therefore, I replaced the poorly fitting item (NS-IB9) on the non-social scale with item NS-IB1. Following this item replacement, measurement model one showed adequate fit, $\chi^2(73.966)=34$, $p<.0001$, CFI=.965, TLI=.953, RMSEA=.078. The non-social items showed improved construct loadings (.58 to .87). Again, the social and non-social constructs

exhibited a weak positive correlation (.24). I retained this modified model for the rest of the analysis.

I then subjected measurement model one to confirmatory factor analysis on the holdout sample. The results of the maximum likelihood indicated that the model again represented reasonable fit, $\chi^2(75.041)=34$, $p < .0001$, CFI=.971, TLI=.962, RMSEA=.077, supporting *H1a*. The social and non-social factors shared a moderate positive correlation (.27) and all items showed strong factor loadings (.75 to .87). I then combined the training and holdout samples to test the model on the full 415 cases. The analysis also revealed the model to have reasonable/good fit ($\chi^2(109.292)=34$, $p < .0001$, CFI=.971, TLI=.961 and RMSEA=.073). All items showed strong factor loadings (.67 to .87) and the social and non-social constructs were moderately correlated (.24). Finally, the phase one and phase two samples were combined to create a dataset of 614 cases. The final measurement model one (see: figure 5.2) represented a reasonable to good fit for the data $\chi^2(135.748)=33$, $p < .0001$, CFI=.972, TLI=.963 and RMSEA=.070. The social and non-social constructs were positively correlated (.12) and all items showed strong factor loadings (.67 to .88) (see: table 5.7). I subjected the two alternative measurement models identified in phase one (see: table 5.4) to the same procedure of exploratory factor analysis on the training sample, and confirmatory factor analysis on the holdout and combined samples. The summary of these analyses is also provided in table 5.7.

Step two: unidimensionality and reliability

In the full phase two sample ($n = 415$) measurement model one (see: figure 5.2) exhibited satisfactory unidimensionality and reliability. The social impulsive buying (.66) and non-social impulsive buying (.64) AVE values both exceeded .50. α estimates (S-IB=.91; NS-IB=.90) and construct reliability values were good (S-IB=.91; NS-IB=.89).

Table 5.7: Summary of measurement model fit*

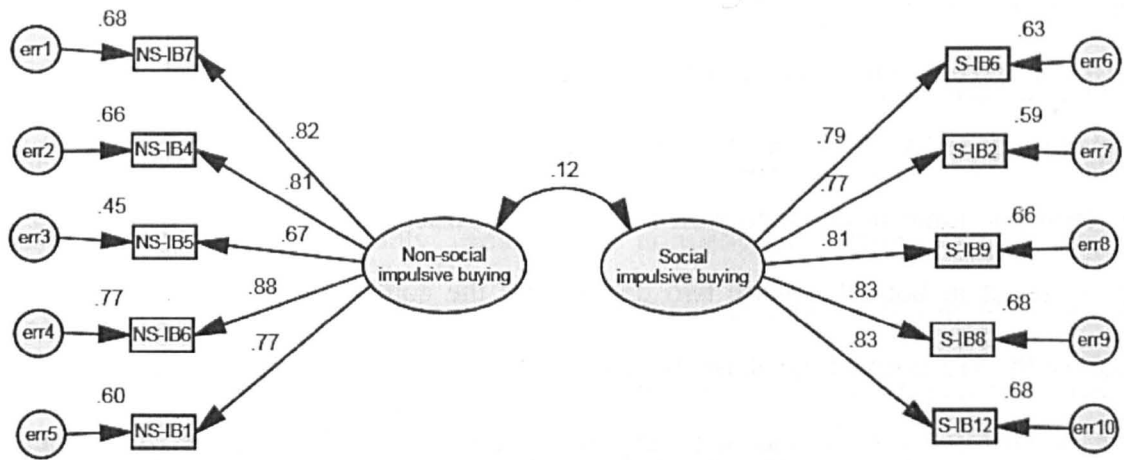
Model	Inter-construct correlation ^a	Item-construct correlations	Model fit	AVE (average variance extracted)	α	Construct reliability
<i>Model one</i>	.24		$\chi^2(109.292)=34$, Chi sq/df = 3.214, p <.0001, CFI=.971, TLI=.962, RMSEA=.073			
S-IB scale (5 item)		.81, .78, .81, .84, .84		.66	.91	.90
NS-IB scale (5 item)		.79, .84, .67, .87, .81		.64	.90	.89
<i>Model two</i>	.23		$\chi^2(210.526)=34$, Chi sq/df = 6.192, p <.0001, CFI=.922, TLI=.897, RMSEA=.112			
S-IB scale (5 item)		.56, .78, .80, .84, .84		.59	.87	.87
NS-IB scale (5 item)		.80, .79, .83, .89, .31		.57	.84	.85
<i>Model three</i>	.25		$\chi^2(259.131)=53$, Chi sq/df = 4.889, p <.0001, CFI=.928, TLI=.911, RMSEA=.097			
S-IB scale (6 item)		.81, .79, .81, .83, .84, .58		.61	.90	.90
NS-IB scale (6 item)		.78, .84, .67, .87, .81, .30		.54	.86	.86

*Full phase two sample (n=415)

^a non-social impulsive buying – social impulsive buying correlation

The analysis of the alternative measurement models revealed similar satisfactory unidimensionality and reliability (see: table 5.7).

Figure 5.2: Measurement model one (n = 614)



Step three: Convergent and discriminant validity with buying impulsiveness

To test for convergent and discriminant validity I created a model with the social and non-social scales and the *buying impulsiveness scale*. In order to explore the convergent and discriminate validity it was necessary to select one model for more detailed analysis. I selected measurement model one (see: figure 5.2) by using the confirmatory factor analyses and the theoretical basis of the items. As can be seen from table 5.7, model one exhibited an improved fit and item-construct correlations compared with models two and three. From here on, I refer only to model one and performed no further analysis on models two and three. I then assessed a model of measurement model one and the *buying impulsiveness scale* using the 415 cases of phase two. The analysis revealed that the model provided adequate fit, $\chi^2(468.368)=149$, Chi sq/df = 3.14, $p < .0001$, CFI=.939, TLI=.929 and RMSEA=.072. The correlation between the social factor and *buying impulsiveness scale* was moderate (.45) and the correlation between the non-social factor and *buying impulsiveness scale* was very strong (.85). This indicated that both scales demonstrated convergent validity with the

general impulsive buying tendency. However, the correlation between the non-social impulsive buying and *buying impulsiveness scale* showed high shared variance (72%).

To examine the correlations further I compared the average variance extracted and squared interconstruct correlations for the social scale, non-social scale and *buying impulsiveness scale*. I used the full phase two dataset and the combined phase one and two datasets for this analysis. The results of this analysis (see: table 5.8) revealed that the social scale items had more in common with the social construct than the *buying impulsiveness scale* construct in both the phase two dataset and the combined dataset. However, the analysis of the 415 cases of the phase two dataset indicated that the non-social scale and the *buying impulsiveness scale* shared a very strong correlation. Furthermore, the squared interconstruct correlation between the non-social and *buying impulsiveness scale* (.72) was greater than the average variance extracted for the separate scales (NS-IB .64 and *buying impulsiveness scale* .53). This suggested that the items for the non-social scale measure a very similar impulsive buying construct as the *buying impulsiveness scale*.

Table 5.8: Summary of convergent/discriminant validity*

Model	Target-construct to <i>buying impulsiveness</i> correlation	AVE (average variance extracted)	SIC (squared interconstruct correlations)
<i>Phase two dataset (n=415)</i>			
S-IB (5 item)	.45	.66	.0605, .2043
NS-IB (5 item)	.80	.64	.0605, .7225
<i>Buying impulsiveness scale</i>	N/A	.53	.2043, .7225
<i>Phase one and two dataset (n=614)</i>			
S-IB scale (5 item)	.46	.64	.0141, .2116
NS-IB scale (5 item)	.71	.63	.0141, .4984
<i>Buying impulsiveness scale</i>	N/A	.51	.2116, .4984

*measurement model one (see: figure 5.2)

Step four: Nomological network

Next, I assessed the nomological validity of the constructs by testing the correlations between the social and non-social constructs, and the conceptually related constructs of the Big-Five facets (Goldberg, et al, 2006) and the general impulsiveness facet (Barratt impulsiveness scale; Spinella, 2007). The correlations related to the phase two hypotheses are reported in full below and the analysis of all the variables is summarised in tables 5.9 (Big-Five personality facets) and 5.10 (Barratt impulsiveness scale). Prior to the analysis I examined all of the personality variables for normality of distributions. As expected skewness or kurtosis were non-normal for all Big-Five and impulsivity variables, but values were moderate. I computed the 5% trimmed means to check for the potential effects of outliers and they did not show severe deviations from the sample mean.

Correlations with conscientiousness (H3): Based on previous research one of the strongest expected relationships between the social and non-social constructs and personality was the conscientiousness facet (e.g., Verplanken & Herabadi, 2001). There were significant negative correlations between both the social ($r = -.185; p < .01$) and non-social ($r = -.203; p < .01$) factors and conscientiousness. This provides support for *H3a* and *H3b* that there would be a negative correlation between conscientiousness and both social and non-social impulsive buying.

Correlations with emotional stability (H4): Emotion has been reported as a significant influence across the impulsive buying process (e.g., Beatty & Ferrell, 1998). Furthermore, neuroticism and the general impulsive buying tendency are positively correlated (e.g., Wong, Tu, & Lin, 2010). Therefore, emotional stability was predicted to negatively correlate with the social and non-social impulsive buying constructs. The results provide support for *H4a* and *H4b*, as both the social ($r = -.177; p < .01$) and the non-social ($r = -.215; p < .01$) constructs were negatively correlated with emotional stability.

Table 5.9: Correlation matrix of Big-Five personality facets and impulsive buying constructs^a

		<i>Buying impulsiveness</i>	Non-social impulsive buying	Social impulsive buying	Ext	Agree	Con	Emo	Imag
<i>Buying impulsiveness scale</i>	Pearson Correlation	1							
Non-social impulsive buying	Pearson Correlation	.759**	1						
Social impulsive buying	Pearson Correlation	.425**	.231**	1					
Extraversion	Pearson Correlation	.221**	.187**	.009	1				
Agreeableness	Pearson Correlation	.074	.009	-.024	.368**	1			
Conscientiousness	Pearson Correlation	-.226**	-.203**	-.185**	.149**	.303**	1		
Emotional stability	Pearson Correlation	-.228**	-.215**	-.177**	.256**	.174**	.385**	1	
Imagination intellect	Pearson Correlation	.075	.039	.022	.359**	.316**	.394**	.136**	1

** Correlation is significant at the 0.01 level (2-tailed)

^a Full phase two sample (n=415)

Correlations with extraversion (H5): Although the general impulsive buying tendency is significantly correlated with extraversion (Verplanken & Herabadi, 2001) there was also mixed evidence for how it may influence the social and non-social factors. Therefore, *H5a* and *H5b* were two-tailed and predicted a significant correlation between extraversion and the social and non-social constructs but with no direction. The results support *H5b* for the non-social factor ($r = .187; p < .01$) but not *H5a* for the social factor ($r = .009; p = .847$) where a non-significant correlation was found.

Correlations with the general factor of impulsiveness (H6): The personality factor of impulsiveness is a significant factor in the general impulsive buying tendency (Wuen, Jones, & Beatty, 1998). Therefore, I expected the impulsivity scale to correlate with both the social and non-social factors. The analysis supports *H6a* for the social ($r = .251; p < .01$) and *H6b* for the non-social constructs ($r = .420; p < .01$). The strongest sub-scale correlation was that of motor impulsivity which exhibited significant correlations with both of the social ($r = .214; p < .01$) and non-social scales ($r = .510; p < .01$). As can be seen from table 5.10, non-planning and attentional impulsivity also exhibited significant positive correlations with the social and non-social factors

Step five: Influence of gender

The participants reported four demographic variables: age, gender, education level and income. The correlation between these variables and the impulsive buying constructs are reported in full in appendix nine. I explored the influence of gender in greater detail during step five and the analysis is reported below.

Gender: As discussed in phase one, gender has been reported as a significant variable in the general impulsive buying tendency. Therefore, gender was explored as an influence on the social and non-social scales.

Table 5.10: Correlation matrix of Barratt Impulsiveness scale and impulsive buying constructs^a

		<i>Buying impulsiveness</i>	Non-social impulsive buying	Social impulsive buying	Motor impulsivity	Non planning	Attention	Barratt scale full
<i>Buying impulsiveness scale</i>	Pearson Correlation	1						
Non-social impulsive buying	Pearson Correlation	.759**	1					
Social impulsive buying	Pearson Correlation	.425**	.231**	1				
Motor impulsivity	Pearson Correlation	.596**	.510**	.214**	1			
Non planning	Pearson Correlation	.184**	.153**	.151**	.181**	1		
Attention	Pearson Correlation	.248**	.261**	.185**	.422**	.289**	1	
Barratt scale full	Pearson Correlation	.470**	.420**	.251**	.727**	.702**	.756**	1

** Correlation is significant at the 0.01 level (2-tailed).

^aFull phase two sample (n=415)

The measurement model restricted to the phase two ($n = 415$) female participants resulted in good fit, $\chi^2(74.794) = 34, p < .0001$, CFI=.974, TLI=.963 and RMSEA=.075. The social and non-social factors showed a weak positive correlation (.15). The model limited to male participants resulted in similar fit $\chi^2(73.662) = 34, p < .0001$, CFI=.962, TLI=.950, and RMSEA=.076 but with a strong positive inter-construct correlation (.37). These results suggested that the model fits well for both males and females, but that the correlation between social and non-social forms of impulsive buying is stronger for males.

The measurement model was then constrained by gender but this did not result in significant worsening of fit ($\chi^2(1.383) = 1, p = .248$) suggesting that gender was not an influence on the fit of the model. To further analyse the role of gender I compared the differences between the mean social and non-social scores for males and females. The mean social score was higher for females (13.20) than males (12.49), whereas the mean non-social score was higher for males (13.40) than females (13.30). However, a T-Test for equality of means suggested that these differences were not significant for either the non-social ($p = .835$) or social ($p = .117$) scales, or the general impulsive buying tendency ($p = .201$).

Step six: Exploration of the inter-construct correlations

In the phase one sample, the social and non-social factors exhibited a weak negative correlation ($r = -.17; p < .01$). However, the correlation between the constructs was positive in the phase two sample ($r = .24; p < .01$). The general impulsive buying tendency was shown to be a moderating influence in this relationship in phase one. Accordingly, the phase one participants exhibiting a stronger than mean score on the *buying impulsiveness scale* (Rook & Fisher, 1995) also exhibited a negative correlation between the two factors. Whereas, those with a weaker general impulsive buying tendency exhibited a positive correlation between the two factors.

As the final step in the phase two analysis I examined the correlation between the social and non-social constructs. Firstly, the *buying impulsiveness scale* was entered as a control variable in the correlation between non-social impulsive buying and social impulsive buying. As can be seen from table 5.11, the correlation between social impulsive buying and non-social impulsive buying was significant and positive with no control variable. However, when controlling for the general impulsive buying tendency the partial correlation was negative.

Table 5.11: *Buying impulsiveness scale* as control variable: social and non-social impulsive buying

Control variable			Social impulsive buying
None	Non-social impulsive buying	Correlation Coefficient	.231**
		Sig. (2-tailed)	.000
<i>Buying impulsiveness scale</i>	Non-social impulsive buying	Partial correlation Coefficient	-.156*
		Sig. (2-tailed)	.002
* Correlation is significant at the 0.05 level (2-tailed)			
** Correlation is significant at the 0.01 level (2-tailed)			

The phase two sample was then split by mean *buying impulsiveness scale* score. The participants with a low *buying impulsiveness scale* score ($n = 206$) exhibited a weak positive correlation between the social and non-social constructs ($r = .24; p < .01$). Whereas, the participants with a stronger impulsive buying tendency ($n = 209$) exhibited a negative correlation between the constructs ($r = -.20; p < .01$). These results supported the analysis of the inter-construct correlation from phase one. They again suggest that the stronger a consumer’s general impulsive buying tendency, the more they tend to be either a social or non-social impulsive buyer.

Next, I explored the correlation between the *buying impulsiveness scale* and the social and non-social constructs further using the split file. With the file split by general impulsive buying tendency mean score, the participants with a lower *buying impulsiveness* tendency showed a significant correlation between the *buying impulsiveness scale* and both social ($r = .44$; $p < .01$) and non-social impulsive buying ($r = .54$; $p < .01$). Whereas, for the participants with a higher *buying impulsiveness* tendency the correlation between the *buying impulsiveness scale* and non-social impulsive buying was significant ($r = .52$; $p < .01$) but was not significant for social impulsive buying ($r = .103$; $p = .139$). Therefore, I entered non-social impulsive buying as control variable in this relationship (table 5.12). When controlling for non-social impulsive buying the partial correlation between social impulsive buying and *buying impulsiveness* was significant. Therefore, the analysis further supports the strong relationship between the *buying impulsiveness scale* and the non-social scale.

Table 5.12: Non-social impulsive buying as a control variable: social impulsive buying and high mean *buying impulsiveness*

Control variables			<i>Buying impulsiveness scale (high mean)</i>
None	Social impulsive buying	Correlation Coefficient	.103
		Sig. (2-tailed)	.139
Non-social impulsive buying	Social impulsive buying	Partial correlation Coefficient	.251**
		Sig. (2-tailed)	.000
** Correlation is significant at the 0.01 level (2-tailed)			

5.3.5 Phase two discussion

The results of the phase two analysis provided further support for *H1a* and *H1b*; namely, that the general impulsive buying tendency may be separated into social and non-social constructs. The confirmatory factor analysis indicated that a five item scale of social impulsive buying and a five item scale of non-social impulsive buying provided good fit. In

the phase one sample the correlation between the social and non-social factors was negative; however, this correlation was positive in the phase two sample. On further inspection the analysis of this correlation revealed that a stronger general impulsive buying tendency is associated with a stronger negative correlation between the social and non-social factors. This again suggests that participants who are more regular impulsive buyers exhibit a stronger tendency to be either social or non-social impulsive buyers.

The phase two analysis also revealed that the social scale exhibited a moderate correlation with the general impulsive buying tendency for both the phase two sample and the combined phase one and two sample. Furthermore, the social scale demonstrated expected discriminant validity from the impulsive buying tendency. However, the non-social scale showed a strong correlation in both the phase two and combined phase one and two samples. The analysis of the average variance extracted indicated that the non-social scale items had more in common with the non-social construct than the *buying impulsiveness scale* construct. Therefore, both of the scales demonstrated convergent and discriminant validity with the general impulsive buying tendency. However, this analysis did reveal that the social scale appears to be offering the stronger theoretical contribution as the non-social scale is much more strongly correlated with the general impulsive buying tendency. With the sample split by mean *buying impulsiveness scale* score the correlation between social impulsive buying and higher general impulsive buying tendency was non-significant. When non-social impulsive buying was entered as a control variable this correlation was significant. This indicated that the non-social impulsive buying tendency was explaining the non-significant correlation between social impulsive buying and general impulsive buying tendency. Therefore, the results implied that there may be consumers who exhibit high *buying impulsiveness scale* scores but do not engage in social impulsive buying. The analysis of the nomological network provided further support for the stronger contribution of the social

scale as the non-social scale and *buying impulsiveness scale* exhibited similar correlations with the Big-five and the general factor of impulsiveness. For example, the social scale did not exhibit a significant correlation with extraversion, unlike both the non-social and *buying impulsiveness scales*.

5.4 Phase one and two discussion

The results of both phases indicated that individuals display different social and non-social forms of the impulsive buying tendency. Accordingly, the findings of the scale development stage provide considerable support for project sub-question one. Furthermore, the scales to measure the social and non-social factors showed good internal reliability, and exhibited required convergent and discriminant validity with conceptually related constructs. The analysis suggested that the scales fit within the expected nomological network of facets of behaviour related to impulsive buying behaviour. The new scales appear to be capturing new forms of impulsive buying not measured by the general impulsive buying tendency scale (Rook & Fisher, 1995).

Interestingly the correlation between the social and non-social scales changed direction based on the strength of the participants' general impulsive buying tendencies. In phase one, the social and non-social impulsive buying constructs were negatively correlated, whereas in the phase two sample the participants' social and non-social tendencies were positively correlated. However, splitting the phase one and two samples by the *buying impulsiveness scale* sample mean resulted in a stronger negative correlation between the social and non-social constructs for the higher mean group. The analysis, therefore, implied that participants who engage in impulsive buying more frequently had a stronger preference for the settings in which they impulsively buy. Supporting these findings, the phase one sample were selected to be above average on trait *buying impulsiveness*, whereas the phase two sample's trait *buying impulsiveness* was not pre-specified.

The difference in correlation between impulsive buying that occurs while shopping with others, or while shopping alone, for low and high tendency impulsive buyers may represent an especially important contribution to theory. Using this knowledge, researchers can model impulsive buying with underlying moderating factors of the general and social impulsive buying tendency, and examine their relationship with variables such as social setting and enjoyment. For example, the results suggest consumers who engage in less impulsive buying may also tend to be concerned less with the social setting. Exploration of the underlying social or general impulsive buying tendency may assist with identifying where variables interact across the impulsive buying process. For example, situational factors (e.g., social) may be more important for those who frequently impulsively buy than those who less frequently do so. Furthermore, the relationship between enjoyment and impulsive buying may be related to not only the impulsive behaviour itself but also the environment and the setting. It may be that the antecedents of an impulsive purchase are less related to enjoyment for some consumers and therefore enjoying the situation is less important. There may be other factors which are more likely to trigger impulsive urges for these consumers, such as sales or product offers.

While both the factors of social and non-social impulsive buying positively correlated with the general impulsive buying tendency, this was a much stronger correlation for the non-social factor. As discussed in the analysis this correlation represented a high shared variance of around 70% for the phase two data, although this was somewhat lower at around 40% when including both the phase one and two data. These results suggest that the *buying impulsiveness scale* measures a general facet of impulsive buying which is also captured by the non-social scale, whereas the social scale captures a new aspect of trait impulsive buying. If consumers behave differently in social and non-social buying situations they may struggle to accurately report their usual impulsive buying on a general scale which

does not specify situation. As the new social and non-social scales are situational, they could help consumers to be more specific about any difference in their usual impulsivity.

The strong contribution of the social scale is corroborated by the lack of correlation with extraversion, whereas previous studies have reported extraversion as a significant variable in the impulsive buying tendency (e.g., Verplanken & Herabadi, 2001). I discuss the implications of this finding in chapter seven (*discussion*), but briefly the non-significant correlation indicates that social shopping may offer an opportunity for introverts to be impulsive. For example, an introverted person may be encouraged to buy with friends, whereas they feel uncomfortable doing this alone due to inhibition or a lack of assertion (Goldberg, 1992). The analysis of the nomological network also indicated that personality factors may be less influential on social impulsive buying tendencies than the non-social or general impulsive buying tendencies. The personality variables all showed weaker correlations with the social impulsive buying tendency than with the non-social and *buying impulsiveness scale*. Therefore, the findings indicate that there may be key differences in how personality interacts with social and non-social forms of impulsive buying.

5.5 Summary

The results of the phase one and phase two data collection provided support for the internal validity, unidimensionality and convergent properties of the scales. The social scale in particular appeared to offer a unique contribution to understanding of the impulsive buying tendency. Furthermore, the nomological network analysis revealed that the social scale exhibited different correlations with personality variables than the existing *buying impulsiveness scale*. Hence, the analysis suggested there is a clear potential for the scales to add to theory of impulsive buying and personality. However, I did not explore the predictive validity of the scales during the scale development. Therefore, it was not clear if the scales correlated with impulsive behaviour. Given the potential importance of the scales to

contribute to theory and research, I planned a third and final stage of data collection to test the scales predictive validity. In the next chapter, I describe the quasi-experiment using hypothesised buying scenarios I used during data collection stage three.

6. Chapter six: Quasi-experiment scale validation

Data collection stage three

6.1 Introduction

Following the development of the social and non-social impulsive buying scales, I designed a third stage of data collection to test the predictive validity of the scales. This final stage was necessary as I was only able to analyse the internal validity and unidimensionality of the scales during the second stage. Consequently, I selected a quasi-experimental design to test the construct validity of the scales in both social and individual buying situations. 108 participants were exposed to hypothetical social and non-social buying scenarios. The results indicated that the social impulsive buying tendency exhibits a stronger correlation with behaviour in social situations than the existing Rook and Fisher (1995) scale. However, Rook & Fisher's (1995) scale better predicted behaviour in a non-social scenario than the non-social scale. The design of the scenarios was crucial to the success of the quasi-experiment. Accordingly, I piloted three scenarios with nine impulsive buyers prior to the study. I open this chapter by discussing this pilot, and the resulting design of the social and non-social scenarios. Next, I describe the study method and the results of the quasi-experiment. Finally, I briefly discuss the results. A more detailed consideration of the findings is provided in the next chapter, where I integrate the results of the full project.

6.2 Hypotheses

The stage two analysis indicated that the construct validity of the social and non-social scales was strong. Furthermore, both scales fit within expected nomological network relationships. Importantly, the social and non-social scales exhibited strong correlations with the existing impulsive buying tendency, which is a predictor of impulsive buying behaviour

(e.g., Rook & Fisher, 1995). Therefore, the hypotheses for stage three relate to the potential predictive validity of the scales in social and non-social buying scenarios.

H7- The social impulsive buying tendency will (a) positively correlate with the social scenario outcome (b) more strongly than the non-social tendency or the general impulsive buying tendency

H8 – The non-social impulsive buying tendency will (a) positively correlate with the non-social scenario outcome (b) more strongly than the social tendency

6.3 Scenario pilot

As I described in the method, I used hypothetical buying scenarios because of their flexibility and ease of application. The design of these buying scenarios was of utmost importance, and the ability of a participant to project themselves into the scenario is crucial for successful use (Rook & Fisher, 1995). The details of the three draft scenarios, which were compiled to explore the wording and design, are included in table 6.1 (and appendix ten). These drafts were adapted from the Rook and Fisher (1995) scenarios and I designed a social and non-social form of each draft scenario. The three draft scenarios had a number of differences relating to the planned item, the impulsive item, the item prices and the outcomes. All three drafts had four general adaptations from Rook and Fisher (1995): 1) the location name was changed from the specific US based store, to a general “department store” which was more recognisable for UK consumers. 2) The original planned item purchase of socks was changed to the product category of shoes. This change was made to ensure relevance of the item to the participants. 3) The price of the impulsive item was updated to a modern UK context by converting the original Rook and Fisher price to 2014. 4) Finally, a social and a non-social version of the scenarios were drafted by altering the context of the scenarios.

Table 6.1: Summary of features of the three draft scenarios

	Version A	Version B	Version C
Purpose for planned item	Item on shopping list	Item on shopping list	"needs to buy shoes for work"
Planned item	Shoes	Shoes for work	Comfortable shoes for work
Impulsive item	Sweater	Great looking sweater	Great looking sweater
Impulsive item price	£40	£70	Over £100
Outcomes:			
1)	Buying the shoes only	Buying the work shoes only	Buying the shoes, not trying the top on
2)	Buying the shoes, wanting the sweater	Buying the work shoes and trying the sweater on	Wanting the sweater but not trying on
3)	Not buying the shoes	Not buying work shoes, going back to look at sweater	Not buying work shoes, going back to look at sweater
4)	Buying both shoes and sweater	Buying both work shoes and sweater	Buying both work shoes and sweater, using a credit card
5)	Buying both items, plus matching pair of jeans	Buying both items, plus matching pair of jeans	Buying both items, plus matching pair of jeans using a credit card

Nine participants comprising seven females and two males, were recruited for the pilot to test the scenario design. The gender bias was a practical limitation with the pilot that stemmed from the gender of the respondents. I discuss the issues associated with gender bias in the limitations section of the discussion. To recruit the participants I placed an advert on the Open University intranet asking for participants in a short pilot study relating to consumer behaviour. The participants took part in one-on-one interviews lasting approximately 20 minutes, in which they discussed five aspects of the scenarios: the choice of the planned item, the choice of the impulsive item, the price of the impulsive item, the social and non-social aspects, and the outcome options. I made note of important issues during the interviews and recorded relevant participant comments. Following the pilot I reviewed the notes and discussed the results with my supervisors.

Choice of planned and impulsive items: The participants were asked to consider the planned item choice and how it relates to their usual shopping behaviour. Based primarily on the clarity of the statement, all participants suggested version B was the best option: *"It needs to be clear for why shoes, what is the purpose of them...this is better in this one (B)"*. The shoes were seen as a typical planned purchase, both when shopping alone or with others. The participants also suggested that the need for the planned item was clear in version B, as the shoes were for work. However, the addition of "comfortable" in version C was not seen as a useful change.

The impulsive item choice was a sweater in all three draft scenarios. All of the participants felt a sweater represented a typical impulse buy and was sufficiently generic for the participants to identify with the impulse to buy: *"Reasonable impulse buy"* and *"...typical type of product I might buy"*. The participants found the contrast between the functional work shoes and the sweater to be clearer in option B. In draft scenario B, it was clear that the sweater was a "wanted" rather than "needed" item compared with the "necessary" work shoes. The sweater also had a universal appeal for both men and women. Although some of the participants felt a more exciting item may be better, they conceded that the sweater would appeal to a wider group. Furthermore, the choice of an item of clothing for the impulse buy highlighted the social aspect of the social scenario, e.g., trying the item on. The relatively generic nature of the planned and impulsive items also enabled the participants to project themselves into the scenario. For example, many discussed their own interpretations for the use of the sweater, e.g., for a party.

Item price: All of the participants described version A's £40 as being too low to cause any concern over buying the impulsive item: *"40 pounds isn't really a lot for a sweater"* and *"40 pounds is too little, I would just buy both"*. However, the £100 cost in version C was considered to be too much for an impulse buy for most participants, as one person

explained, “100 would stop me being impulsive, I would be sensible”. £65-70 was accepted by the majority as a figure close to the limits for the costs of a sweater impulse buy.

Social and non-social aspect: The participants were also asked to discuss the contrast between the social and non-social versions of the scenarios. In all of the draft social scenarios the shopper was described as being with a companion who encouraged the trying on of the sweater. In the non-social scenarios the shopper was described as shopping alone. The participants felt the use of the more generic “companion” rather than “friend” was useful to allow them to project a friend, family member or other individual into the scenario. However, many felt it would be useful to have a short statement to qualify what was meant by companion, such as friend or colleague. The participants felt it would be useful to add an option for trying on the sweater into the social scenario outcomes as it implied a social encouragement aspect to the choice.

Outcome impulsivity options: In option A the outcome choices were focused on the item purchase and did not include any reference to the shopper trying the sweater on. In options B and C the shopper tried on the top in the second outcome. All participants felt trying the item on was a useful change as trying on the item was considered to represent a step towards impulsively buying. Consequently, the participants felt that each outcome from 1 through 5 represented a more impulsive outcome, or a step closer to an impulsive purchase. All of the participants described the outcomes as representing typical decisions or outcomes during shopping. The relatively generic nature of the outcomes also allowed the participants to project themselves into the scenario easily.

6.3.1 Final scenario design

Based on the input from the pilot participants, the final social and non-social scenario designs (provided below) are a combination of the three drafts. I added a brief introduction explaining the social or non-social context and describing the “companion” aspect of the

social scenario. Female, male and gender neutral versions of the scenarios were created, the use of which is discussed in the method below. The female version of the scenarios is provided below. The scenario outcomes are rated from low (1) to high (5) impulsiveness.

Social scenario design

Instructions- Please read the following scenario in which Clare is going shopping with a companion (this could be a friend, family member or a work colleague etc.). Following this select one of the 5 options which best describes what you think would be the outcome. Please think about your own experiences when viewing the scenario and thinking about the outcomes.

Scenario- “Clare is in the shopping centre with a companion to buy some shoes for work. They go to a department store to buy the work shoes. In the clothing section there is great looking sweater on sale for £65. Her companion encourages her to try it on”

Outcomes- Which option best describes the outcome?

1. Buying the work shoes only and not trying the top on
2. Buying the work shoes and trying the top on
3. Deciding not to buy the work shoes but to come back later with her companion to see the sweater again
4. Buying the shoes and the sweater using a credit card
5. Buying the work shoes, the sweater and a matching item of clothing using a credit card

Non-social scenario design

Instructions- Please read the following scenario in which Clare is going shopping alone. Following this select one of the 5 options which best describes what you think would be the outcome. Please think about your own experiences when viewing the scenario and thinking about the outcomes.

Scenario- “Clare is alone in the shopping centre to buy some shoes for work. She goes to a department store to buy the work shoes and in the clothing section there is great looking sweater on sale for £65”

Outcomes -Which option best describes the outcome?

1. Buying the work shoes only and not trying the top on
2. Buying the work shoes and trying the top on
3. Deciding not to buy the work shoes but to come back later to see the sweater again
4. Buying the shoes and the sweater using a credit card
5. Buying the work shoes, the sweater and a matching item of clothing using a credit card

6.4 Method

6.4.1.a Participants

I used convenience sampling to recruit participants from the Open University intranet (including postgraduate Facebook page) and used a series of advertisements calling for participants to take part in a Ph.D. research study. 180 participants responded to the advert, 68 of these responses were not complete and a further four cases were removed due to missing data. Consequently, 108 participants were sampled, comprising 85 females and 23 males (see: analysis of gender in section: 6.6, *step three*). 40 participants comprised group one and 68 comprised group two, the randomisation process for these groups is described below. Sample demographics are provided in table 6.2.

6.4.1.b Design

The 108 participants took part in a one-way repeated measures quasi-experiment and were exposed to a social buying scenario and a non-social buying scenario. The dependent variables were the level of impulsive buying recorded in the outcome of the social scenario and the level of impulsive buying recorded in the outcome of the non-social scenario. The independent variables were the impulsive buying tendency scales and demographic variables.

Table 6.2: Demographics of valid responses in data collection stage three

Demographic information	Full sample (n = 108)		Group one(n = 40)		Group two (n = 63)	
	n	%	n	%	n	%
Gender						
Female	85	78.7	35	87.5	50	73.5
Male	23	21.3	5	12.5	18	26.5
Prefer not to answer	-	-	-	-	-	-
Age						
18-24	2	1.9	-	-	2	2.9
25-34	30	27.8	14	35	16	23.5
35-44	36	33.3	17	40	20	29.4
45-54	26	24.1	7	17.5	19	27.9
55-64	14	13.0	3	7.5	11	16.2
65+	-	-	-	-	-	-

The participants were split into two groups which influenced response order, group one saw version one of the study and group two saw version two. To counterbalance and thus control for order effects, the order of the scenarios was reversed between the groups. Accordingly, in study version one the social scenario preceded the non-social scenario, and in study version two the non-social scenario preceded the social scenario.

There were two phases to the study. During phase one, the participants were recruited and then completed the *buying impulsiveness scale* and the social/non-social scales. During the second phase, the participants were exposed to the social and non-social scenarios. To minimise priming effects, a minimum of 24 hours elapsed between the first and second phases. This ensured the participants did not complete the study immediately after completing the social and non-social scales. Prior to the study, I used G*Power¹¹ to estimate the required sample size based on a predicted effect size of between .4 and .6. The

¹¹ G*Power allows statistical power analyses based on a number of parameters, including effect size and required power. <http://www.gpower.hhu.de/en.html>

results of this analysis indicated that a minimum sample size of 80 was required (i.e., 40 participants in each group).

6.4.1.c Materials

Buying impulsiveness scale (Rook & Fisher, 1995)

This scale is described in detail in chapters four and five. The mean impulsive buying tendency for the stage three participants was 22.61 (s.d. = 6.32) and the scale showed good internal consistency ($\alpha = .87$).

Social and non-social impulsive buying scales

The development of these scales is described in detail in chapter five. The mean score on the social scale was 13.31 (s.d. = 3.80) and on the non-social scale was 14.05 (s.d. = 4.4). The scales showed good internal consistency (social: $\alpha = .89$; non-social: $\alpha = .87$).

Mind-set induction

As discussed in the method chapter, a mind-set induction task preceded the scenarios. The participants were instructed to spend a minute or two on a task to recall a recent social trip before the social scenario and a non-social shopping trip before the non-social scenario. While the participants were given the opportunity to write down details, there was no requirement for them to do so. 78 of the 108 participants wrote some information related to their social/non-social shopping. The mindset induction instructions for the social and the non-social task are provided in figure 6.1.

6.4.1.d Procedure

6.4.1.d.i Phase one- recruitment

The advertisements included a hyperlink to the study webpage, which included study details, information about data usage, confidentiality and information for data withdrawal. The webpage also provided details of the prize draw, which included the chance to receive one of two £50 vouchers as an incentive for participation. An information sheet (see: appendix eleven) was available for download, with full details of the study, prize draw and

my contact details. The prize draw was scheduled to take place at the end of the data collection. After providing informed consent, the participants completed the social impulsive buying scale, non-social impulsive buying scale and *buying impulsiveness scale* (Rook & Fisher, 1995). Participants confirmed their email address and were told that the link to the second phase of the study would be sent out after 24-48 hours. I deleted any data without an email address following phase one. All participants were provided with unique identification numbers for data withdrawal. No participant asked for their data to be removed

Figure 6.1: Mind-set inductions instructions and task

Instructions:	“Please read the passage below, once you have finished reading please write down some basic information. You don't need to include lots of detail and may leave the box blank if you wish, but if you do not want to write anything then please still spend some time to think about the passage.”
Preceding the social scenario:	“Please take a minute to briefly reflect on a recent shopping trip that occurred when you were shopping with a companion (this may be a friend, family member etc..) and the experience you had during this trip. In particular the type of planned or unplanned purchases you may have made and urges or desires to buy you may have experienced. Please also consider how this may be similar to or differ from your usual shopping behaviour when alone.”
Preceding the non-social scenario	“Please take a minute to briefly reflect on a recent shopping trip that occurred when you were shopping with a companion (this may be a friend, family member etc..) and the experience you had during this trip. In particular the type of planned or unplanned purchases you may have made and urges or desires to buy you may have experienced. Please also consider how this may be similar to or differ from your usual shopping behaviour when alone.”

6.4.1.d.ii Phase two- study

All valid phase one responses were assigned a unique URL to tie the phase one and phase two data together and these URLs were sent after 24 hours had elapsed. Participants were informed that they should not share the URL with anyone and that they should only use the URL provided. Study version one was mailed to participants until 40 fully useable responses were collected (group one). I stopped collecting data for version one at 40

responses to ensure I met the minimum sample size of 80 recommended by G*Power. I then mailed out version two of the study and 68 useable responses were collected (group two). The second phase webpage contained further study information and another copy of the information sheet.

After providing consent, the participants selected their gender from three options: "male," "female" and "do not want to answer" so that they could be allocated the correct scenario. Those selecting "do not wish to answer" would have been directed to a gender neutral version (in the event, all gave their gender). Group one participants were then shown the social mind-set and group two were shown the non-social mind-set. The participants were then exposed to the first scenario, either social (group one) or non-social (group two). This process was repeated, reversing the order of the social and non-social mind-set and scenario. The entire process took approximately 10-15 minutes. At the end of the study the participants were asked to give brief details of where they completed the study and if anyone else was present. I used this information to ensure the participants did not complete the study in a particularly distracting environment. None of the responses indicated that the participants had completed the study in a distracting environment. Participants were finally asked to provide an email address for entry into the prize draw and were thanked for their time. After the completion of the study the two prize draw winners were selected using a random number generator and were contacted.

6.5 Analysis approach

Data were analysed in four steps. In the first step, I explored the dataset for missing data and outliers, and I computed the descriptive statistics of the social and non-social scales. The social, non-social and *buying impulsiveness scales* (Rook & Fisher, 1995) were also subjected to confirmatory factor analysis. In the second step, the correlations between the impulsive buying tendency scales and the scenarios were explored. The group one and group

two data were analysed separately and then combined to analyse the full dataset of 108 participants. In the third step, I analysed the dataset with gender as a grouping variable. In the fourth step, I explored the correlation between the social and non-social impulsive buying scales and the scenarios by using the general impulsive buying tendency as a control variable. In the fifth step, I performed multiple regression on the two scenarios with the impulsive buying tendency scales. Finally, in the sixth step I performed a repeated measures ANCOVA to analyse the interactions between the scenarios, order effects (i.e., group one & group two), gender, the impulsive buying scales, and age.

6.6 Results

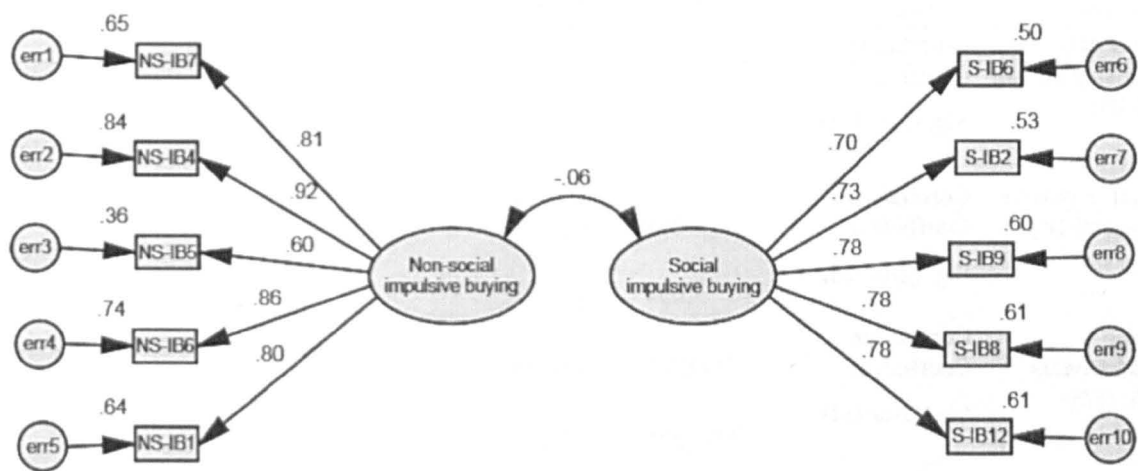
Step one: Confirmatory factor analysis

The data were first explored for extreme outliers, missing data and problem responses. Four of the 120 cases who completed phase one and two were removed due to missing data. The missing data were all multiple missing items on the tendency scales. After removal of these cases, 40 responses formed group one and 68 responses formed group two. The analysis of the scale distributions indicated that skewness values were close to normal with values ± 0.2 . The kurtosis of the items were moderately non-normal with values ± 1.0 . My analysis of the scenario scores indicated that the skewness value was moderately non-normal for the social scenario but strongly non-normal for the non-social scenario with a value exceeding $+1.0$. The kurtosis value was strongly non-normal for the social scenario with values exceeding -1.0 and was moderately non-normal for the non-social scenario. These values suggested that the scenario score distributions were strongly non-normal. Parametric tests, such as Pearson's r , are sensitive to the normality of distributions (e.g., Kowalski, 1975). Consequently, non-parametric tests are recommended with non-normal distributions as they do not assume the normality of the data. Therefore, I used Spearman's

Rho (ρ) for the correlation analysis I report in this chapter. The results of parametric analysis are provided in appendix twelve.

I analysed the factor structure of the newly developed scales (see: figure 6.2) using the 108 cases from groups one and two. The CFA results indicated that the model provides excellent fit; $\chi^2(41.215) = 34, p = .184, CFI = .988, TLI = .983,$ and $RMSEA = .045$. There was a weak negative correlation between the two factors ($-.06$) and all items showed sufficient item loadings ($.60-.92$). Both scales demonstrated good internal reliability (NS-IB: $\alpha = .89$; S-IB: $\alpha = .87$).

Figure 6.2: Measurement model confirmatory factor analysis (n = 108)



Step two: Correlation analysis of impulsive buying tendency scales and scenario outcomes

Group one (n = 40)

The social impulsive buying tendency factor, non-social impulsive buying tendency factor and *buying impulsiveness scale* factor were entered into a bivariate correlation with the social and non-social scenario outcomes (see: table 6.3). Social and non-social impulsive buying exhibited a non-significant negative correlation ($r_s = .268$). The non-social tendency was significantly correlated with *buying impulsiveness* ($r_s = .353$) but the social tendency showed a non-significant correlation with *buying impulsiveness* ($r_s = .199$). The social

impulsive buying scale exhibited a significant positive correlation with the social scenario ($r_s = .525$) and a non-significant negative correlation with the non-social scenario ($r_s = -.059$). The non-social impulsive buying tendency displayed a non-significant negative correlation with the social scenario ($r_s = -.168$) and a non-significant positive correlation with the non-social scenario ($r_s = .168$). The *buying impulsiveness scale* exhibited a non-significant positive correlation with the social scenario ($r_s = .096$) and a significant positive correlation with the non-social scenario ($r_s = .340$).

Table 6.3: Group one full correlation matrix

		Non-social impulsive buying	Social impulsive buying	BIS	Impulsiveness in social scenario	Impulsiveness non-social scenario
Non-social impulsive buying (NS-IB)	Correlation	1				
	Coefficient					
	Sig. (2-tailed)					
Social impulsive buying (S-IB)	Correlation		1			
	Coefficient	-.268				
	Sig. (2-tailed)	.094				
<i>Buying impulsiveness scale (BIS)</i>	Correlation			1		
	Coefficient	.353*	.199			
	Sig. (2-tailed)	.025	.217			
Impulsiveness in social scenario	Correlation				1	
	Coefficient	-.168	.525**	.096		
	Sig. (2-tailed)	.300	.001	.557		
Impulsiveness in non-social scenario	Correlation					1
	Coefficient	.168	-.059	.340*	.239	
	Sig. (2-tailed)	.300	.717	.032	.138	

** .Correlation is significant at the 0.01 level (2-tailed)

* .Correlation is significant at the 0.05 level (2-tailed).

Group two (n = 68)

I then repeated the analysis with the group two dataset (see: table 6.4). The social impulsive buying tendency and non-social impulsive buying tendency showed a non-significant positive correlation and were both significantly correlated with the *buying impulsiveness scale* (NS-IB: $r_s = .458$, S-IB: $r_s = .511$). As with group one the social

impulsive buying tendency was significantly correlated with the social ($r_s = .396$), but not the non-social ($r_s = .195$) scenario. The non-social impulsive buying tendency was positively correlated with the non-social scenario ($r_s = .208$) and the social scenario ($r_s = .056$) but neither correlation was significant. The *buying impulsiveness scale* was positively correlated with the social scenario ($r_s = .078$) and displayed a significant positive correlation with the non-social scenario ($r_s = .240$). The social and non-social scenario were significantly correlated ($r_s = .408$).

Table 6.4: Group two full correlation matrix

		Non-social impulsive buying	Social impulsive buying	BIS	Impulsiveness in social scenario	Impulsiveness non-social scenario
Non-social impulsive buying (NS-IB)	Correlation Coefficient	1				
	Sig. (2-tailed)					
Social impulsive buying (S-IB)	Correlation Coefficient	.071	1			
	Sig. (2-tailed)	.563				
<i>Buying impulsiveness scale (BIS)</i>	Correlation Coefficient	.458**	.511**			
	Sig. (2-tailed)	.000	.000			
Impulsiveness in social scenario	Correlation Coefficient	.056	.396**	.078	1	
	Sig. (2-tailed)	.648	.001	.530		
Impulsiveness in non-social scenario	Correlation Coefficient	.208	.195	.240*	.408**	1
	Sig. (2-tailed)	.088	.111	.048	.001	
** Correlation is significant at the 0.01 level (2-tailed)						
* Correlation is significant at the 0.05 level (2-tailed).						

Group one and two (n = 108)

Next, I analysed the difference between the group one and group two correlation coefficients to determine if they were equal. I converted the correlation coefficients to z-scores using Fisher's *r*-to-*z* transformation. Then using the sample size, I compared the z-scores using the formula from Cohen and Cohen (1983) to obtain the *p*-value associated with

the two-tailed hypothesis. Although this computation process is typically used with Pearson's r , analysis of the process using Spearman's Rho indicates that it is more robust than converting the Spearman coefficients to Pearson's r , or ignoring the non-normality and using Pearson's r (Myers & Sirois, 2006). The analysis did not show any significant differences between the impulsive buying tendency scales and the scenario scores between the group one and group two data (see: table 6.5). Consequently, it was acceptable to continue with the analysis using the combined group one and two samples.

Table 6.5: Test for difference between correlation coefficients

		Non-social impulsive buying	Social impulsive buying	BIS	Impulsiveness in social scenario	Impulsiveness non-social scenario
Non-social impulsive buying (NS-IB)	z-score	N/A				
	Sig. (2-tailed)					
Social impulsive buying (S-IB)	z-score	-1.679	N/A			
	Sig. (2-tailed)	0.093				
<i>Buying impulsiveness scale (BIS)</i>	z-score	-0.611	-1.76	N/A		
	Sig. (2-tailed)	0.540	0.078			
Impulsiveness in social scenario	z-score	-1.096	0.798	0.088	N/A	
	Sig. (2-tailed)	0.273	0.424	0.929		
Impulsiveness in non-social scenario	z-score	-0.201	-1.246	0.531	-0.920	N/A
	Sig. (2-tailed)	0.840	0.212	0.595	0.357	

Following the analysis of the difference between the groups, I combined the group one and group two datasets (see: table 6.6). Non-social impulsive buying and social impulsive buying showed a non-significant negative correlation ($r_s = -.079$). Both non-social impulsive buying and social impulsive buying were positively and significantly correlated with the *buying impulsiveness scale* (NS-IB: $r_s = .389$, S-IB: $r_s = .422$). Social impulsive buying was the only impulsive buying tendency to significantly correlate with the social scenario ($r_s = .437$). Both non-social impulsive buying ($r_s = .204$) and *buying impulsiveness*

($r_s = .277$) were significantly correlated with the non-social scenario. The social and non-social scenarios were again positively and significantly correlated ($r_s = .345$).

Table 6.6: Combined group one and two full correlation matrix

		Non-social impulsive buying	Social impulsive buying	BIS	Impulsiveness in Social scenario	Impulsiveness Non-social scenario
Non-social impulsive buying (NS-IB)	Correlation Coefficient	1				
	Sig. (2-tailed)					
Social impulsive buying (S-IB)	Correlation Coefficient	-.079	1			
	Sig. (2-tailed)	.419				
<i>Buying impulsiveness scale (BIS)</i>	Correlation Coefficient	.389**	.422**	1		
	Sig. (2-tailed)	.000	.000			
Impulsiveness in Social scenario	Correlation Coefficient	-.031	.437**	.085	1	
	Sig. (2-tailed)	.749	.000	.384		
Impulsiveness Non-social scenario	Correlation Coefficient	.204*	.106	.277**	.345**	1
	Sig. (2-tailed)	.034	.273	.004	.000	
**Correlation is significant at the 0.01 level (2-tailed)						
*Correlation is significant at the 0.05 level (2-tailed).						

I then tested for the significance of the differences between the impulsive buying tendency scales and the social and non-social scenario. The correlation between social impulsive buying and the social scenario (see: table 6.7) was significantly larger than the correlation between the non-social impulsive buying scale and social scenario ($p = <.001$), and the correlation between the *buying impulsiveness scale* and the social scenario ($p = <.001$). However, the correlation between non-social impulsive buying and non-social scenario was not significantly different (see: table 6.8) than either the correlation between social impulsive buying and non-social scenario ($p = 0.46$) or the correlation between *buying impulsiveness* and the non-social scenario ($p = 0.48$). The correlation between the social

scale and the non-social scenario was larger, but not significantly different than the correlation between *buying impulsiveness* and non-social scenario ($z = 1.67, p = 0.09$).

Table 6.7: Test for difference between impulsive buying tendencies and social scenario correlations

		Non-social impulsive buying social scenario	<i>Buying impulsiveness scale</i> social scenario
Social impulsive buying– social scenario	z-score	3.22	3.524
	Sig. (2-tailed)	0.00**	0.00**

**Correlation is significant at the 0.01 level (2-tailed)

Table 6.8: Test for difference between impulsive buying tendencies and non-social scenario correlations

		Social impulsive buying – non-social scenario	<i>Buying impulsiveness scale</i> non-social scenario
Non-social impulsive buying– non-social scenario	z-score	0.753	0.704
	Sig. (2-tailed)	0.45	0.48

Step three: Demographic analysis

I then entered gender as a grouping variable in the full 108 sample dataset (see: appendix 13 for full table of this analysis). The analysis revealed that the social scale was significantly correlated with the social scenario for the female participants ($r_s = .440$) but not the males ($r_s = .397$). These correlations are very similar, but the correlation for the male sample was non-significant due to the small sample size. The non-social and *buying impulsiveness scale* were significantly correlated with the non-social scenario for females (NS-IB: $r_s = .244$; *buying impulsiveness scale*: $r_s = .368$) but not males (NS-IB: $r_s = .037$; *buying impulsiveness scale*: $r_s = -.120$). Furthermore, the social scale was significantly correlated with the *buying impulsiveness scale* for both males ($r_s = .757$) and females ($r_s = .333$). The non-social scale also showed a significant correlation with the *buying impulsiveness scale* for both males ($r_s = .464$) and females ($r_s = .351$). However, the sample

size of the male participant group was 23 and the analysis was therefore underpowered (while the size of correlation coefficient is similar to that of the female group). I discuss this issue further in chapter seven.

Step four: Buying impulsiveness as a control variable

The results of the step two analysis indicated that the non-social and social scales correlated with the respective scenarios. To further analyse these correlations, I entered the *buying impulsiveness scale* as a control variable. The correlation between the non-social scale and the non-social scenario was significant ($r=.203$) with no control variable. However, the correlation was non-significant ($r = .046$) with the general impulsive buying tendency as a control variable (see: table 6.9). This finding again suggests that the non-social scale and the general impulsive buying scale measure a similar construct. To explore this further I added the non-social scale as control variable in the correlation between the *buying impulsiveness scale* and the non-social scenario. The *buying impulsiveness scale* retained a significant correlation ($r = .336$) with the non-social scale set as a control variable. Therefore, the non-social impulsive buying scale tendency does not explain any unique variance in non-social buying behaviour beyond that explained by the *buying impulsiveness scale*.

Table 6.9: Non-social impulsive buying and non-social scenario

Control variables		Non-social scenario	
None	Non-social impulsive buying	Correlation Coefficient	.203*
		Sig. (2-tailed)	.036
	<i>Buying impulsiveness scale</i>	Correlation Coefficient	.384*
		Sig. (2-tailed)	.000
<i>Buying impulsiveness scale</i>	Non-social scenario	Partial Correlation Coefficient	1
		Sig. (2-tailed)	
	Non-social impulsive buying	Partial Correlation Coefficient	.046
		Sig. (2-tailed)	.640
*. Correlation is significant at the 0.05 level (2-tailed)			

I next ran the analysis using the *buying impulsiveness scale* as a control variable for social impulsive buying. The relationship between the social impulsive buying tendency and the social scenario was still significant ($r = .447$) with *buying impulsiveness* as a control variable (see: table 6.10). This implies that the social scale explains unique variance in social buying behaviour over the effects of the general impulsive buying tendency.

Table 6.10: Social impulsive buying and social scenario

Control variables		Social scenario	
None	Social impulsive buying	Correlation Coefficient	.443**
		Sig. (2-tailed)	.000
	<i>Buying impulsiveness scale</i>	Correlation Coefficient	.097
		Sig. (2-tailed)	.317
<i>Buying impulsiveness scale</i>	Social scenario	Partial Correlation Coefficient	1
		Sig. (2-tailed)	.
	Social impulsive buying	Partial Correlation Coefficient	.443**
		Sig. (2-tailed)	.000
** Correlation is significant at the 0.01 level (2-tailed)			

Step five: Multiple regression analysis

In step five, I performed linear regression analysis to explore the variance explained by the independent variables in the social and non-social scenario dependent variables. The tolerance and VIF figures indicated that there were no multicollinearity issues. Firstly, I explored the social scenario and in accordance with *H7*, I entered the social scale first and then the *buying impulsiveness scale* and the non-social impulsive buying scale (see: table 6.11). As expected, the strongest contribution was provided by the social impulsive buying scale, which accounted for close to 20% of the variance ($p = <.001$). Neither the *buying impulsiveness scale* nor the non-social impulsive buying explained meaningful or significant variance.

Table 6.11: Linear regression using social scenario

Variable	Multiple R	R square	Adjusted R square	F change
Step 1				
S-IB	.443	.196	.189	25.915**
Step 2				
S-IB, BIS & NS-IB	.452	.204	.181	.518

Note: S-IB = social impulsive buying, NS-IB = non-social impulsive buying, BIS = *Buying impulsiveness scale*

** Correlation is significant at the 0.01 level (2-tailed)

Next, I explored the non-social scenario using the same method and in accordance with *H8* entered the non-social scale score first, and the *buying impulsiveness scale* and the social scale second. As can be seen from table 6.12, non-social impulsive buying made a significant contribution but accounted for only 4% of the variance. However, adding the *buying impulsiveness* and social impulsive buying scales accounted for close to 11% of the variance. Of these two variables, the *buying impulsiveness scale* made a unique significant contribution ($p < .001$) while the social scale did not ($p = .829$). As *buying impulsiveness* made the strongest contribution, I then entered it first in the final multiple regression (see: table 6.12). When entered first, *buying impulsiveness scale* accounted for close to 15% of the variance ($p < .001$), while neither the non-social scale nor the social scale made any significant contribution.

Table 6.12: Linear regression using non-social scenario

Variable	Multiple R	R square	Adjusted R square	F change
Step 1				
NS-IB	.203	.041	.032	4.532*
Step 2				
NS-IB, BIS, S-IB	.387	.150	.109	6.641*
Step 1				
BIS	.384	.147	.129	18.335**
Step 2				
NS-IB, S-IB	.387	.150	.125	.132

Note: S-IB = social impulsive buying, NS-IB = non-social impulsive buying, BIS = *Buying impulsiveness scale*

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed).

Step six: Repeated measures ANCOVA

In step six, I examined how the gender and order effects, and the impulsive buying scales and age interacted to affect impulsive buying in the scenarios. I set the social and non-social scenarios as within-subjects factors by defining the social scenario as level one, and the non-social scenario as level two in a repeated measures ANCOVA. I added group (i.e., group one or group two) and gender as between-subjects factors, and age, *buying impulsiveness scale*, non-social impulsive buying and social impulsive buying as covariates. In order to examine the scenario interaction with each factor or covariate, I set the analysis to display parameter estimates (see: table 6.13)

An inspection of the multivariate tests and within-subjects effects revealed that there was no significant effect for scenario ($F = .077$; $p = < .782$) without the interactions of the *buying impulsiveness scale* ($F = 15.695$; $p = < .001$) and social impulsive buying scale ($F = 27.258$; $p = < .001$). Therefore, indicating that any relationship between the social and non-social scenarios was explained by the impulsive buying tendencies; providing further support for the importance of trait behaviour for impulsive buying. Supporting the results of the earlier linear regression analysis, Wilk's Lambda indicated that there was approximately 86% of the scenario variance not accounted for by the *buying impulsiveness scale* and 79% not accounted for by social impulsive buying. Of the remaining variables only age made any meaningful, but still non-significant, contribution ($F = 3.477$; $p = .065$). I then inspected the parameter estimates of the social scenario, which indicated that only social impulsive buying made a significant contribution ($t = 4.847$; $p = < .001$). Neither the *buying impulsiveness scale* ($t = -.855$; $p = .395$) nor the non-social impulsive buying ($t = -.213$; $p = .831$) had any significant effect; group, age and gender also had no significant effects (see: table 6.13). The parameter estimates of the non-social scenario indicated that only the *buying impulsiveness scale* ($t = 3.458$; $p = < .001$) had a meaningful contribution. However, neither social impulsive buying ($t = -.466$; $p = .642$) nor non-social impulsive buying ($t = .169$; $p = .866$)

had a significant effect in the non-social scenario. Age was closest of the remaining variables to significance for the non-social scenario ($t = -1.768$; $p = .080$).

Table 6.13: Repeated measures ANCOVA

	Within-subjects effects		Parameter estimates	
	<i>F</i>	Sig.	Social scenario ($t =$)	Non-social scenario ($t =$)
Scenario*	.077	.782	1.429	1.740
Scenario*BIS*	15.695**	.000	-.855	3.458**
Scenario*S-IB	27.258**	.000	4.847**	-.466
Scenario*NS-IB	.003	.953	.213	.169
Scenario*Age	3.477	.065	.275	-1.768
Scenario*Gender	.019	.892	Male: -1.232	Male: -.312
Scenario*Group	.341	.560	One: .362	One: .367

Note: S-IB = social impulsive buying, NS-IB = non-social impulsive buying, BIS = *Buying impulsiveness scale*

**Correlation is significant at the 0.01 level (2-tailed)

For the next stage of analysis I explored the interaction between the covariates and the scenarios by modelling the relationships. Firstly, I preformed additional analysis on the role of gender by modelling: gender and the *buying impulsiveness scale*; gender and social impulsive buying; and gender and non-social impulsive buying (see: table 6.14). I modelled each interaction between gender and the scales separately to explore the individual effects. When controlling for gender the social scale still made a significant meaningful contribution to the scenario interaction, and showed a significant effect for both males ($p = <.001$) and females ($p = <.001$) in the social scenario. *Buying impulsiveness scale* did not make a significant contribution to the scenario interaction, but showed a significant effect for the non-social scenarios for the females ($p = <.001$) and the males ($p = <.05$). Non-social impulsive buying did not affect the scenario interaction, but was significantly correlated with the non-social scenario for females. Consequently, the analysis indicated that without

controlling for the effects of the *buying impulsiveness scale*, the non-social scale was a significant predictor of non-social impulsive buying for females.

Table 6.14: Scenario and covariate interaction effects (gender)

	Within-subjects effects		Parameter estimates			
	F	Sig.	Social scenario		Non-social scenario	
			Male (<i>t</i>)	Female (<i>t</i>)	Male (<i>t</i>)	Female (<i>t</i>)
Scenario*gender*BIS	2.972	.056	.670	.975	2.852*	4.151**
Scenario*gender*S-IB	6.397*	.002	4.274**	5.071**	.542	1.278
Scenario*gender*NS-IB	2.611	.078	-.231	-.241	1.139	2.160*

Note: S-IB = social impulsive buying, NS-IB = non-social impulsive buying, BIS = *Buying impulsiveness scale*

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed).

Following the analysis of gender I explored the interaction between the scenarios and the impulsive buying tendency scales in further detail, specifically whether the *buying impulsiveness scale* interacted with the social impulsive buying and non-social impulsive buying scales (see: table 6.15). Again, I modelled these interactions separately and did not control for the effects of the other factors. The analysis indicated that the scenario interaction was significant with the *buying impulsiveness scale* and non-social impulsive buying model interactions ($p = <.001$). Furthermore, the *buying impulsiveness scale* and non-social impulsive buying scale showed a significant interaction with the non-social scenario ($t = 4.230$; $p = <.001$). Importantly, the interaction between the non-social scale and the *buying impulsiveness scale* had a stronger effect on the non-social scenario ($t = 4.230$; $p = <.001$), than the individual effect of the *buying impulsiveness scale* ($t = 3.458$; $p = <.05$). Therefore, the non-social impulsive buying scale appears to make some form of contribution even when controlling for the general impulsive buying tendency. The interaction between social impulsive buying and *buying impulsiveness* did not affect the interaction between the scenarios. However, the interaction between these two scales and both the social ($t = 3.169$;

$p = .001$) and non-social scenario ($t = 3.388$; $p = <.001$) was significant; albeit these correlations were weaker than the individual effects of the social scale and social scenario ($t = 4.847$; $p = .001$), and *buying impulsiveness scale* and non-social scenario ($t = 3.458$; $p = .05$). Therefore, controlling for the effects of the *buying impulsiveness scale* did not significantly diminish the effects of the social scale for the social scenario. Finally, I modelled the social impulsive buying and non-social impulsive buying interaction, which did not make a significant contribution to the scenario interaction. However, when controlling for the non-social impulsive buying the social scale retained a significant effect with the social scenario ($t = 2.731$; $p = <.05$). The non-social impulsive buying and social impulsive buying was also significantly correlated with the non-social scenario ($t = 2.619$; $p = .05$).

Table 6.15: Scenario and covariate interaction effects (impulsive buying tendency)

	Within-subjects effects		Parameter estimates	
	F	Sig.	Social scenario ($t =$)	Non-social scenario ($t =$)
Scenario*BIS*NS-IB	11.377**	.001	.086	4.230**
Scenario*BIS*S-IB	.285	.595	3.619**	3.388**
Scenario*NS-IB*S-IB	.138	.711	2.731*	2.619*

Note: S-IB – social impulsive buying, NS-IB = non-social impulsive buying, BIS = *Buying impulsiveness scale*

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed).

6.7 Discussion

The findings from the quasi-experiment provide further support for the use of the scales to measure social and individual aspects of impulsive buying. Both of the scales demonstrated good internal reliability and the factor analysis confirmed the factor structure of the measurement model. The moderate significant correlation between the social and non-social scenario scores also supports there being a distinction between social and non-social

forms of impulsive buying. Furthermore, the ANCOVA analysis indicated that the *buying impulsiveness scale* and social impulsive buying tendency scale made a significant contribution to the relationship between the social and non-social scenario.

The analysis of the correlations between the social and non-social scales and the hypothesised scenario outcomes extended the support for the construct validity of the scales to external validity. The social and non-social scales both significantly correlated with the respective social and non-social scenarios in the full dataset, supporting *H7a* and *b* and *H8a* and *b*. Moreover, the existing impulsive buying tendency scale (*buying impulsiveness scale*: Rook & Fisher, 1995) did not exhibit a significant correlation with the social scenario. The correlation between the social scale and the social scenario was also significantly larger than the correlation between the non-social or general impulsive buying tendency scales and the social scenario. Therefore, the quasi-experiment findings indicate that the social scale represents an important contribution for future research as a scale to measure social forms of impulsive buying.

The analysis of the scale development data in chapter five revealed that the non-social construct shared high variance with the general impulsive buying tendency. The quasi-experiment analysis supports the scale development findings as the correlation between the non-social scale and non-social scenario was not significantly larger than the *buying impulsiveness scale* and non-social scenario correlation. Furthermore, with *buying impulsiveness* as a controlling variable, the non-social factor did not show a significant correlation with the non-social scenario in the multiple regression or ANCOVA. Therefore, the non-social scale does not appear to make a significant contribution over that provided by the existing impulsive buying tendency scale; again indicating that the non-social scale measures a very similar form of impulsive buying as the general impulsive buying tendency.

The multiple regression and ANCOVA supported the correlational analysis; as only the social scale made a meaningful contribution to the social scenario and only the *buying impulsiveness scale* made a meaningful contribution to the non-social scenario. Accordingly, there is support for the use of the social scale alongside the general impulsive buying tendency scale to accurately capture a consumer's behaviour in social and non-social situations. However, the social scale and non-social scenario correlation was weaker, but not significantly different than the *buying impulsiveness scale* and non-social scenario correlation; but the sample size of the study is likely to have affected this relationship.

The lack of correlation between the *buying impulsiveness* and the social scenario further implies that *buying impulsiveness* may measure a more general form of impulsive buying tendency. When the participants were able to more clearly define their impulsive behaviour in a social setting, their impulsive buying tendency scores better correlated with their hypothesised behaviour in a social setting. The general statements on the *buying impulsiveness scale* may make it more difficult for respondents to balance typical behaviour in both social and non-social settings. Therefore, based on there being no social aspect to these statements, participants completing the *buying impulsiveness scale* may refer mainly to their usual impulsive behaviours that occur while shopping alone. The ANCOVA analysis of gender and age revealed that neither made a meaningful contribution to the relationship between the social construct and the social scenarios, or the general impulsive buying tendency and the non-social scenario. There was no significant relationship between the non-social scale and the non-social scenario with males as a grouping variable. However, the sample size of the male participant group made power to detect a marginal effect low. As a consequence, the results from the female participant group may be considered more reliable.

6.8 Summary

The quasi-experiment provided support for the unique contribution and construct validity of the social scale. Although the non-social scale also demonstrated construct validity, the contribution to existing theory appears to be mixed. For example, the *buying impulsiveness scale* appeared to better predict behaviour in non-social settings than the non-social scale. However, the non-social scale showed a significant correlation with the social scale and the impulsive buying tendency, suggesting future research into the use of the non-social scale is warranted. I integrate the results of the three data collection phases in the next chapter and consider the implications of the entire thesis. In particular, I consider the potential for the social and non-social constructs to influence behaviour across the four impulsive buying phases.

7. Chapter seven: Discussion and limitations

7.1 Introduction

In this chapter I integrate the project results and consider the implications for researchers and practice, and then reflect on the project limitations. The project findings indicate that there are social and non-social aspects to the impulsive buying tendency, which could exert a significant influence on impulsive buying in social and non-social situations. Consequently, there are considerable theoretical and practical implications.

This chapter is structured as follows: firstly, I briefly discuss the research question to restate the underlying purpose of the project. I then integrate and discuss the interview, scale development and quasi-experiment findings. Next, I consider the theoretical and practical contributions of the project. In the contributions section I discuss the implications of the findings for researchers, retailers and marketers, and those wanting to help impulsive buyers reduce their impulsivity. Finally, I critically reflect on the project, and consider limitations and future research directions.

7.2 Research question recap

In this section I briefly restate the gaps in knowledge of impulsive buying that informed the direction of the project. Research into the social aspects of impulsive buying has largely concentrated on the encouragement or discouragement aspects of shopping with companions (Amos, Holmes & Keneson, 2013). Existing research indicates that negative social norms (e.g., Rook & Fisher, 1995) and family, rather than peer, influence can lead consumers to engage in less impulsivity. However, at the start of the project the influence of social factors in moderating, or interacting with, other impulsive buying antecedents or variables was not known (e.g., Xiao & Nicholson, 2013). I identified that social factors could exert an important moderating influence in impulsive buying, which is greater than currently

understood in the literature. For example, enjoyment is an important part of impulsive buying (e.g., Hausman, 2000). Therefore, a consumer's enjoyment of shopping in different social situations could affect their impulsive behaviour.

There are also a number of inconsistencies in the existing literature concerning how emotion impacts on impulsive buying behaviour. In particular, positive emotions or moods are cited in the existing literature as influential pre-purchase antecedents (e.g., Amos, Holmes & Keneson, 2013; Beatty & Ferrell, 1998); yet, the impulsive buying tendency is also associated with long term negative affect (e.g., Bratko et al, 2013). I also identified that social and emotional factors could interact to affect a consumer's impulsive buying behaviour. Therefore, a mixed-methods study was used to explore how social and emotional factors influence impulsive buying, and the project research was guided by the question:

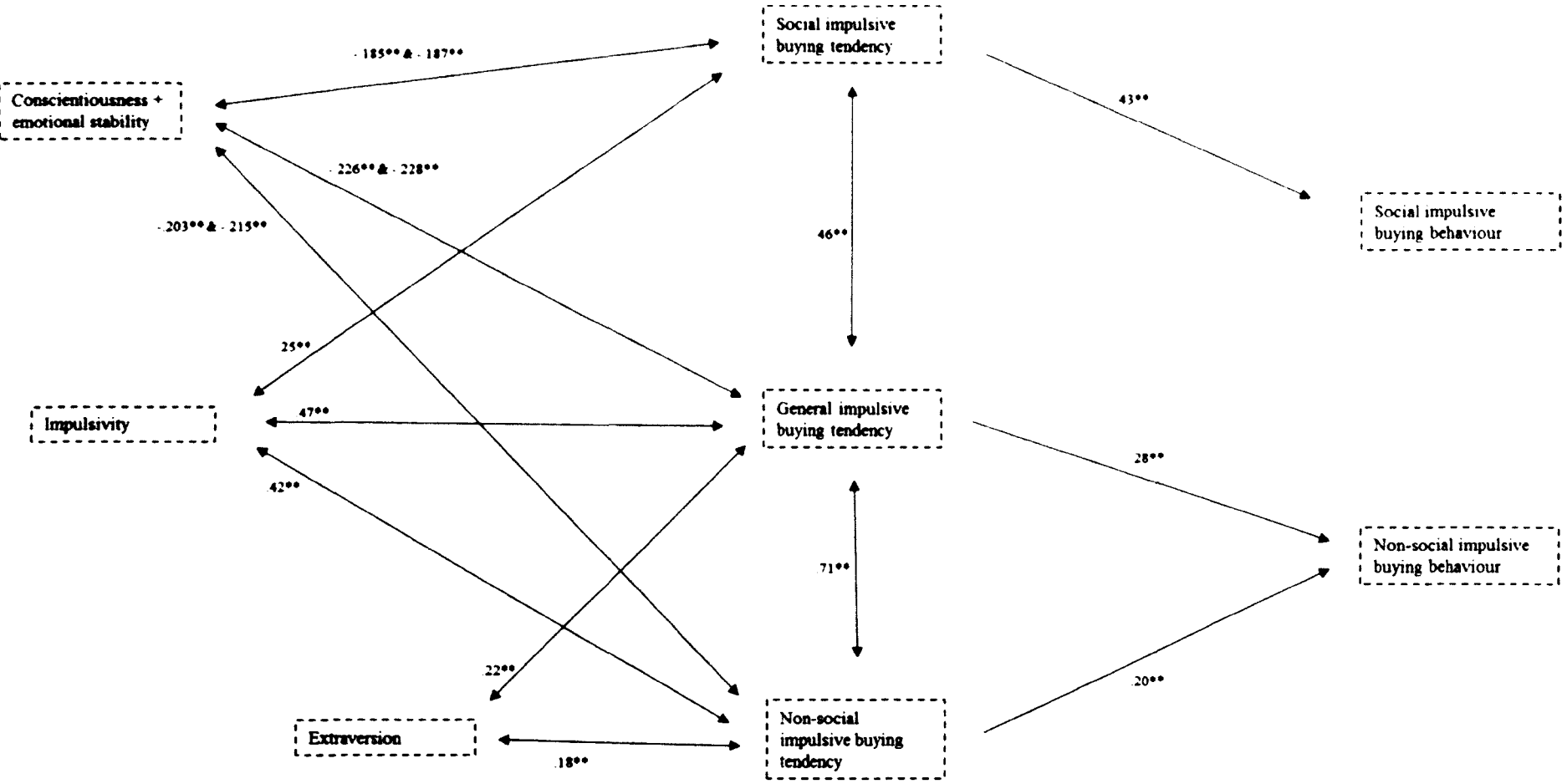
How do impulsive buyers understand the social and emotional influences on their impulsive buying behaviour?

The first stage of the project indicated that social aspects of impulsive buying were especially important, leading to the conceptualisation of a social and a non-social form of the impulsive buying tendency. The second and third stage of the project were guided by two sub-questions:

Sub-question I: Do individuals exhibit different impulsive buying tendencies that are then most likely to be displayed in social situations for some individuals and non-social situations for others?

Sub-question II: Can social and non-social forms of the impulsive buying tendency be measured by a psychometric scale?

Figure 7.1: Model of social and non-social impulsive buying



**Correlation is significant at the 0.01 level (2-tailed)

7.3 Findings discussion

Figure 7.1 shows a model of the significant correlations from the scale development and quasi-experiment stages. In the figure I have combined emotional stability and conscientiousness into one facet as they show the same relationship directions with all three of the impulsive buying tendency scales.

The project findings support the overall focus on social and emotional factors. Furthermore, the findings indicate that social factors are particularly important as there are social aspects to the impulsive buying tendency. Social and non-social impulsive buying tendencies were identified that correlate with hypothesised behaviour in respective social and non-social buying scenarios. Consequently, the main project finding indicates that impulsive buyers may exhibit different levels of impulsive buying in social or non-social situations

The identification of the social and non-social tendencies has a number of associated findings of importance; firstly: the tendencies appear to be strongly related to enjoyment of impulsive buying. Furthermore, the social and non-social tendencies show only a moderate correlation with each other and the general impulsive buying tendency. Secondly: there appears to be an interaction between social setting and emotional factors which influences impulsive behaviour in different social settings. Thirdly: there may be different personality antecedents to the social and general/non-social impulsive buying tendencies. Fourthly: the social impulsive buying tendency better correlates with hypothesised behaviour in a social setting than the non-social or general impulsive buying tendency. The findings have a number of implications for research which are explored in section 7.5.1. The following section discusses the findings.

7.3.1 *The social and non-social impulsive buying tendencies*

In previous research the influence of social context has mainly been theorised as increasing sensitivity to social norms which reduce impulsive spending. However, the stage one interviews provided an initial indication that consumers' impulsive buying habits are situated in a social context. These different forms of impulsive buying were strongly related to the enjoyment of the impulsive experience when shopping with others or alone. In general, the interview data supported the importance of enjoyment in impulsive buying (e.g., Hausman, 2000), but also indicated that enjoyment can vary in social and non-social settings. Evidence from the impulsive buying literature indicates that impulsive buyers enjoy the experience more than the less impulsive (e.g., Rook & Hoch, 1985). However, the interview data suggest that anticipated enjoyment may also be an important part of the impulsive buying process. For example, consumers may choose to engage in mostly social forms of shopping, or may choose to mainly shop alone depending on the extent to which they enjoy shopping with others.

My conceptualisation of the social and non-social tendencies indicated that some consumers would be more impulsive while shopping alone or shopping with others, and other consumers would be impulsive both shopping alone and with others. The findings from the scale development support this initial conceptualisation, as the social and non-social factors were significantly but only moderately correlated. Unexpectedly, the direction of the relationship between social and non-social impulsive buying appears to be related to the overall frequency of a consumer's impulsive buying. Both phase one and phase two of the scale data indicated that consumers who were more frequently impulsive also tended to have a stronger preference for either social or non-social impulsive buying. In other words, the more a consumer engages in impulsive buying the more likely they are to exhibit a tendency towards either impulsive buying in a social context or an individual context. Consequently, the results suggest that the setting of impulsive buying may have more significance for those

are impulsive more frequently. Some consumers may care more about the situation in which they are impulsive and thus behave differently when shopping alone or with others. The implications of the distinction between social and non-social impulsive buying are discussed further in section 7.4.1.a

Impulsive buyers have been defined as unreflective, and impulsive buying as immediate (Rook, 1987). Importantly for the new scales' validity, the scale development data provide support for the underlying behavioural impulsivity associated with the social and non-social tendencies. As a result, the data support the current evidence that impulsivity is a strong indicator of impulsive buying (e.g., Strack & Deutsch, 2006). The social and non-social scale were also significantly correlated with low conscientiousness, which is one of the strongest personality influences on the impulsive buying tendency (e.g., Verplanken & Herabadi, 2001). Consequently, the social and non-social impulsive buying constructs share similar personality properties with the general impulsive buying tendency. However, the analysis of the scales' nomological network indicates that there are some key differences in personality, which are discussed in sections 7.3.3 and 7.4.1.c

An important finding relates to the relationship between the new scales and the existing impulsive buying tendency (Rook & Fisher, 1995). Both the social and non-social scales showed moderate positive correlations during phase one of the scale development. In phase two, the social scale again showed a moderate correlation; however, the non-social scale showed a very strong correlation with the general impulsive buying tendency. The analysis of the relationship between the non-social scale and the general impulsive buying tendency showed that the two scales were statistically distinct. However, the quasi-experiment indicated that the non-social scale did not explain any variance beyond that of the *buying impulsiveness scale*. Therefore, the non-social scale appears to measure a similar impulsive buying construct to the general impulsive buying tendency. The nomological

network analysis also showed very similar correlations between personality variables and the non-social and general impulsive buying tendency. Consequently, the social impulsive buying tendency scale represents a more significant finding for research.

7.3.2 Interaction between social and affective facets of impulsive buying

The importance of affect in impulsive buying is well established (e.g., Youn & Faber, 2000) and the project findings further support this role. The interview participants were aware of the emotional aspects to their behaviour and described emotions or moods as influential in impulsive buying. Positive emotions tend to be cited as more important than negative emotions in the existing literature (e.g., Beatty & Ferrell, 1998). However the interview participants described both positive and negative emotions as being equal importance, but potentially affected by situation. Furthermore, the scale development data indicated that neuroticism is a significant variable in the social, non-social and general impulsive buying tendencies. The interview findings also support the role of impulsive buying as a form of affect regulation (e.g., Fenton-O'Creevy, Furnham, Dibb & Davies, 2012). The participants described types of promotion focused impulsive buying, such as to enhance a good mood, and prevention impulsive buying, such as to “cheer up” a bad mood.

While the project findings support existing understanding of impulsive buying and affect, they also highlight a potential interaction between social setting and affective factors. The social and affective interaction is related to the social and non-social impulsive buying tendencies. The interview participants' discussion of how emotions or moods affected their behaviour was often related to their overall preference for social or non-social impulsive buying. The social impulsive buyers tended to describe social impulsive shopping as being related to mainly positive emotions. This association between social impulsive buying and positive emotions was strongly related to the generally positive nature of social shopping. Shopping is often described as a social activity and as an opportunity for socialising (e.g.,

Bäckström, 2006), thus it was unsurprising that the social impulsive buyers tended to experience positive emotions while shopping with others. However, it was interesting to note that the social setting was also seen as a kind of regulating force by itself. Many of the social impulsive buyers associated non-social, rather than social impulsive buying with negative emotions. The non-social impulsive buyers were less keen on social shopping and thus tended to experience less positive emotions when shopping with others; but experienced both positive and negative emotions while shopping alone. It is important to note that some of the non-social buyers described negative emotions as not especially influential. However, the scale development data also indicated that the social impulsive buying tendency had the weakest correlation with long term negative affect. Therefore, there is preliminary evidence that social forms of impulsive buying might be exhibited by consumers who tend to experience more positive affect.

During the interviews, both the social and non-social impulsive buyers tended to emphasise the short-term focus of making an impulse buy to improve a negative mood. The shorter-term focus appears to relate to an immediate focus on preventing or repairing negative moods, supporting Baumeister (2002b). Interestingly, the participants who discussed outcomes of their impulsive behaviour also suggested that negative outcomes were often associated with purchases made on the basis of negative affect. The interview results, therefore, provide some support for the recent results of Ozer and Gultekin (2015) who found that impulsive buying does not necessarily lead to an improvement in mood. Consequently, negative emotions could lead to a repeated pattern of behaviour as consumers unsuccessfully attempt to use impulsive buying to repair mood. The potential for an interaction between social factors and emotion has a number of implications for understanding of impulsive buying, as discussed in section 7.4.1.b

7.3.3 *Impulsive buying and personality*

Existing research indicates that the general impulsive buying tendency is related to conscientiousness and extraversion (e.g., Verplanken & Herabadi, 2001), and neuroticism (e.g., Bratko et al, 2013). The project results support the role of low conscientiousness and high neuroticism in the impulsive buying tendency. However, the findings from the scale development also indicate that the social impulsive buying tendency and the general impulsive buying tendency have a key difference in personality antecedents. Existing research indicates that extraversion significantly correlates with the cognitive and affective components of the impulsive buying tendency (e.g., Verplanken & Herabadi, 2001). The understanding of extraversion as an important factor for impulsive buying is repeated throughout the impulsive buying literature (e.g., Xiao & Nicholson, 2013). As recently as 2015, extraversion has been reported to significantly correlate with the impulsive buying tendency (Thomson & Prendergast, 2015). However, the evidence from the scale development stage indicates that the role of extraversion may be more complex than previously thought. The scale development data indicated that the social impulsive buying tendency did not significantly correlate with extraversion, while the general and non-social impulsive buying tendencies did.

The non-significant correlation between extraversion and the social scale suggests that both introversion and extraversion traits may be related to social impulsive buying. The lack of relationship between social impulsive buying and extraversion is somewhat surprising at first glance. However, the non-significant correlation suggests that social shopping can offer an outlet for introverts to be impulsive. The negative social norms associated with impulsive buying (e.g., Rook & Fisher, 1995) may be a factor in introverts' behaviour. Social norms discourage some consumers from being impulsive, but being with others could offer a supportive environment to alleviate such concerns. For example, introverts tend to be less assertive (e.g., McCrae, Costa & John, 1998; John & Srivastava,

1999) and may feel less comfortable acting upon their urges while alone. Furthermore, introverts tend to be more inhibited (e.g., Goldberg, 1992) and could be encouraged by a companion to lose their inhibitions. While introversion is distinct from shyness (e.g., Briggs, 1988), the measure I used during the scale development included timidity as a facet of introversion. If introverts tend to experience timidity, then they could engage in social impulsive buying due to the increased social support offered by a close companion. Extraverts might engage in social impulsive buying as they enjoy the social elements to the behaviour, but also feel confident being impulsive when alone; as demonstrated by the significant correlation between extraversion and the non-social tendency during stage two.

The analysis of the nomological network also indicated that the social scale had the lowest correlations with the personality facets in general. For example, both the *buying impulsiveness scale* and the non-social impulsive buying tendency showed moderate correlations with the Barratt impulsiveness scale. However, the social impulsive buying tendency showed a relatively weak/moderate correlation with the Barratt scale and subscales. Furthermore, the differences between the social impulsive buying tendency and impulsivity correlations, and the general impulsive buying tendency and impulsivity correlations were statistically significant. Consequently, the scale development findings indicate that the social impulsive buying tendency has weaker personality antecedents than the general impulsive buying tendency. The weaker role for personality in social impulsive buying supports the strong role of social encouragement. Regardless of a consumer's personality, they may be encouraged or discouraged to make an impulsive purchase (e.g., Rook & Fisher, 1995). The potential differences in how personality affects social or non-social impulsive buyers has a number of significant implications that are discussed in section

7.3.4 *Trait impulsive buying and impulsive purchasing*

The general impulsive buying tendency has been shown to predict impulsive behaviour in various existing studies (e.g., Rook & Fisher, 1995; Verplanken & Herabadi, 2001). The correlation between the impulsive buying tendency and behaviour is cited as justification for use of the scale in purely correlational based studies. Consequently, a great deal of existing research into impulsive buying is based on correlating trait impulsive buying and variables to determine how those variables may act on impulsive buyers (Amos, Holmes & Keneson, 2013). Therefore, the quasi-experiment finding that the social scale, but not the *buying impulsiveness scale*, significantly correlates with hypothesised social impulsive buying is of considerable importance. The general and the non-social impulsive buying tendency both significantly correlated with the non-social scenario, but neither made a significant contribution to explaining the variance in the social scenario. Therefore, the scales currently used to measure trait impulsive buying may not necessarily measure impulsive buying behaviour in social situations. The general questions of the *buying impulsiveness scale* could lead respondents to answer using their non-social impulsive behaviour as the statements do not specify social situation. The moderate correlation between the social construct and the general impulsive buying tendency suggests that specific social impulsive buying statements could enable consumers to be more specific about their behaviour. The lack of correlation between the *buying impulsiveness scale* and social scenario has some important implications for research that I discuss in section 7.4.2

7.4 Contributions

The project findings suggest a number of theoretical contributions and associated research implications for researchers, relating to understanding of impulsive buying. There are also a number of practical implications for retailers and marketers, and those supporting people with impulsive buying problems (including policy makers).

Table 7.1: Theoretical and research implications

Finding	Theoretical implication	Research implications
<i>The general impulsive buying tendency splits into social and non-social constructs. The social tendency shows a moderate correlation with the existing impulsive buying tendency. The non-social tendency shows a moderate-strong correlation with the existing impulsive buying tendency.</i>	There are underlying social aspects to the impulsive buying which influence the impulsive buying tendency. The social and non-social tendencies share moderate correlations with the existing impulsive buying tendency. However, the social and non-social constructs also exhibit different correlations with variables known to influence impulsive buying, such as impulsivity. Current knowledge of trait impulsive buying as situationally stable should be revised.	The social and non-social tendencies can be measured by scales demonstrating good construct validity. The social scale in particular appears to measure a form of impulsive buying distinct from the general impulsive buying tendency. Therefore, researchers should consider the use of the social scale alongside existing impulsive buying scales (e.g., Verplanken & Herabadi, 2001) to fully capture a consumer's impulsive behaviour.
<i>The social and non-social impulsive buying tendency scales exhibit different strengths of correlations with the general facet of impulsivity.</i>	The general facet of impulsivity might be more influential in individual forms of impulsive buying. Therefore, social factors could moderate some of the influence of personality to trigger impulsive urges.	It is important to record the social context of impulsive buying and compare this with a consumer's usual impulsive buying tendencies.
<i>Extroversion is not significantly correlated with social impulsive buying, but shows a significant positive correlation with non-social forms of impulsive buying.</i>	Extroversion is currently understood as a significant antecedent of the cognitive and affective components of the impulsive buying tendency. However, consumers exhibiting introversion appear be more likely to be impulsive in social situations. Introverts could feel more comfortable being impulsive with others or feel more able to act on their impulsivity with social encouragement. Current knowledge of personality and impulsive buying should be revisited to explore how the social and non-social factors interact with other personality variables.	Future research into personality and impulsive buying should involve a comparison of how personality facets interact with both social and non-social forms of impulsive buying. Revisiting knowledge of existing impulsive buying antecedents (e.g., self-image) and social/non-social impulsive buying could also help to clear up some of the current inconsistencies in knowledge.
<i>The social impulsive buying tendency, but not the general impulsive buying tendency, correlates with predicted impulsive behaviour in a social buying scenario</i>	The questions on general impulsive buying tendency scales could be restricting respondents to record mainly non-social forms of impulsive buying. As a result, researchers may need to revisit research based on correlational analysis of the general impulsive buying tendency.	There is a clear need to measure social forms of impulsive buying when investigating impulsive buying behaviour. The general impulsive buying tendency might not align with consumer behaviour in social situations.

I have summarised the main project findings, and their implications for theory and research in table 7.1.

7.4.1 *Theoretical contributions*

The contributions to theory relate to four broad areas associated with the main research findings: firstly: current understanding of the impulsive buying tendency as situationally stable should be revised as there are social and non-social aspects to impulsive buying. Secondly: the emotional aspects of impulsive buying could be strongly related to the social situation. Therefore, impulsive buying as a method of regulating emotion could also be related to social aspects, which has potential implications for understanding of impulsive buying outcomes. Thirdly: social and non-social forms of impulsive buying appear to have different personality antecedents. These differences may extend to other personality variables, such as shared values, which interact with the social and non-social tendencies to influence impulsive urges and behaviour. Fourthly: the relationship between the impulsive buying tendency and behaviour may be affected by social setting and the social and non-social impulsive buying tendencies. Therefore, self-regulation of impulsive urges could be influenced by the social situation.

7.4.1.a Social and non-social impulsive buying

Researchers currently use general impulsive buying tendency scales to evaluate a consumer's likelihood of making an impulsive purchase. As the general scales are relatively short and easy to administer they have been used in many studies to explore how variables interact with or influence trait impulsive buying. The general impulsive buying tendency is also used to predict how variables may act on consumers in real-world settings. Researchers have frequently used these scales in studies involving undergraduate students and extrapolated the results to the wider consumer population. However, the project results indicate that the understanding of a general impulsive buying tendency should be revised to

incorporate social and non-social aspects. Given the reliance on the impulsive buying tendency scales in the existing literature, it is possible that some existing knowledge of impulsive buying is based on incomplete or incorrect information. The potential for the social and non-social scales to advance knowledge of how antecedents influence impulsive buying is of clear academic significance.

Recognising that there are social and individual aspects to impulsive buying will enable researchers to better understand how contextual variables interact to influence urges. Currently, contextual factors are considered to interact with the general impulsive buying trait and mood to influence felt urges. However, contextual influence may also depend on the interaction between social setting and the social and general impulsive buying tendencies. Existing research largely considers social factors to be an external or interpersonal cue. Yet, the evidence from the scale development indicates that social or non-social impulsive buying are trait variables. Accordingly, different retail environments may be associated with social or non-social shopping situations. For example, certain stores may offer a social environment for consumers that attracts social impulsive buyers but puts off non-social impulsive buyers.

An important issue to raise is the wording of the social and non-social tendency labels. The social impulsive buying tendency label defines the type of impulsive behaviour (i.e., “social”) represented by the tendency. However, the non-social tendency label defines the type of impulsive behaviour as not being social, rather than defining the behaviour by what it represents. Re-labelling the non-social tendency to better reflect the behaviour being described could be warranted. As I discussed in the conceptualisations section of the qualitative chapter, the non-social impulsive buying tendency refers to impulsive buying that occurs while a consumer is shopping unaccompanied, rather than shopping in a group context. I, thus, described the non-social tendency as a form of the general impulsive buying

tendency that takes place in an individual shopping context. Although I have used the label 'non-social' throughout the thesis, re-labelling the behaviour as 'individual' for future work will ensure the tendency is more clearly defined. The 'individual' label reflects that it is impulsive behaviour that occurs in a setting when shopping alone, rather than merely being 'non-social'. The label 'non-social' may also have negative connotations as it could wrongly be interpreted as implying that the behaviour is anti-social. Re-labelling the behaviours as 'social impulsive buying' and 'individual impulsive buying' frames impulsive buying in a more neutral manner, which is important given that normative evaluations are a key facet of impulsive buying (e.g., Rook & Fisher, 1995)

7.4.1.b Impulsive buying and affect

The social and individual aspects to impulsive buying appear to be related to different affective antecedents. Existing research tends to emphasise the role of positive, rather than negative affect in leading to impulsive urges. However, the project findings indicate that social aspects of impulsive buying may be strongly related to positive state affect, while individual aspects may be related to both positive and negative state affect. Therefore, the strong role for positive affect reported in the existing literature could be related to the methods that have been used. For example, in existing field research of emotion and impulsive buying (e.g., Beatty & Ferrell, 1998) the social setting is rarely included as a moderating variable. As a consequence, the social situation (i.e., whether the participant was shopping alone or with others) could have influenced emotional antecedents without the researcher's knowledge. In other words, positive and negative emotions may be equally important in impulsive buying; but act on consumers differently when shopping alone or with others.

An interaction between the social setting and affect has theoretical implications for the understanding of impulsive buying as emotion regulation. Researchers acknowledge that

impulsive buying could be used by consumers to prevent a low mood or to promote a good mood. However, if a consumer's emotional reaction to shopping differs in social or individual contexts, then the social setting may also affect attempts to regulate emotion. Social shopping and enjoyment could also interact to influence a consumer's affective state during shopping. In social situations, some consumers may be less likely to experience urges based on negative emotions as the social situation might outweigh any negative mood. For example, a consumer who is mainly impulsive with friends could engage in promotion focused impulsive buying to maintain their positive mood in social situations. However, if they shop alone, they might experience more negative emotions and engage in prevention focused impulsive buying to improve their mood, e.g., to avoid boredom. As a consequence, consumers could come to associate particular types of emotion regulation with certain social impulsive buying settings.

Given the potential for impulsive buying to become a pattern of repeated behaviour, the social setting could play a role in long term impulsive buying. For example, a consumer who exhibits a high social impulsive buying tendency but does not shop with others when in a low mood (or the social setting outweighs the low mood), might start to associate shopping alone with more negative emotions. If impulsive buying does not improve a low mood (e.g., Ozer & Gultekin, 2015), then social impulsive buyers could find their solitary shopping attempts to prevent a low mood are unsuccessful.

Impulsive buying outcomes may also be related to the social setting and affective response to the context in which the impulsive purchase took place. Existing research into impulsive buying highlights the potential for damaging psychological outcomes, but there is little understanding of how contextual factors affect these outcomes. Negative outcomes could result from an interaction between affect and situational factors. Mainly social or non-social impulsive buyers might experience different psychological (or financial) outcomes

from impulsive buying when shopping alone, or with others. For example, guilt could be associated more with products bought on impulse due to negative emotions (which might tend to be experienced when shopping alone). Existing research indicates that consumers sometimes attempt to alleviate feelings of guilt by blaming companions for their impulsive behaviour (Yi & Baumgartner, 2011). Therefore, consumers who are both social and non-social impulsive buyers could use different strategies to cope with their social or non-social impulsive behaviour.

The interaction between social factors and affect could also be influenced by consumer goal setting. Consumers experience different long or short term goals when shopping, which may tend to align with goals of social or non-social shopping. For example, consumers who have the goal of socialising with companions could experience mainly positive emotions and have no need to regulate their emotions. Other consumers may not regard shopping as a form of socialising, and have the goal of shopping as quickly as possible when with others. Consumers' long and short term goals could therefore interact with separate goals for social and non-social shopping. The goals for social and non-social shopping could then interact with social and non-social impulsive buying tendencies to affect impulsive urges; for example, a consumer who has the goal of shopping quickly in a social situation may experience fewer urges due to reduced browsing.

7.4.1.c Impulsive buying and personality

The difference in how personality relates to social and non-social/general impulsive buying tendencies represents an especially strong contribution to theory. The findings indicate that introverts could be more likely to engage in impulsive buying in social situations. The existing understanding of impulsive buying as mainly related to extraversion might have arisen because of researchers' use of the general impulsive buying scale, rather than because introverts are actually less impulsive. It is possible that introverts feel

comfortable buying with others due to the increased social support, or because they are responding to social encouragement. However, the weaker correlations between the personality facets and the social impulsive buying tendency also indicate that personality may be less influential in social shopping than in individual shopping. For example, there could be consumers who have personality traits opposed to impulsivity, who are encouraged while shopping with others to act out of line with their usual behaviour. Therefore, the non-social forms of impulsive buying could be similar to a personality trait, while social forms of impulsive buying could be more strongly related to the companions with which someone usually shops. The implications for future research are discussed in section 7.4.2

The evidence that personality may have a lesser role in social impulsive buying, also supports a social rationality theory of impulsive buying. Impulsive buying is described as deviating from normatively rational consumer behaviour. Furthermore, some impulsive buyers view their own behaviour as irrational leading to feelings of guilt. However, the project findings indicate that social shopping could be used to develop social relationships. The social rationality element of impulsive buying is rarely discussed in the literature, yet it may help to explain why some consumers forgo longer term goals in favour of impulsivity. For example, some consumers may develop relationships with companions which are centered around a shared impulsive buying and shopping experience.

Interpersonal influence factors such as opinion sharing, or shared values, may also be a key factor in social forms of impulsive buying. For example, consumers whose social group have shared values relating to consumption, may be more likely to make impulsive purchases with those friends. If a consumer feels that their social group does not share spending or saving habit values, they might be concerned they will be judged for being impulsive. Therefore, consumers could exhibit values associated with impulsive buying, such as materialism, but they may be less likely to act on impulsive urges if these values

differ from those of their shopping companions. Such consumers might tend to be impulsive mainly when shopping alone, in order to “hide” their impulsivity from friends or family.

7.4.1.d The impulsive buying tendency and impulsive behaviour

Existing research indicates that consumer normative evaluations are a strong influence on the impulsive buying tendency. Impulsive buyers might resist a purchase on the basis of negative judgments or make a purchase on the basis of a positive judgment. There is also evidence that normative judgments are a factor in social shopping; however, the evidence from the thesis indicates that social norms could affect behaviour differently in social and non-social forms of impulsive buying. For example, the lower social visibility associated with impulsive buying that occurs while shopping alone might make consumers feel less concerned with how other people judge their behaviour. Some social groups may encourage impulsive buying and consumers may find it harder to resist their urges in such situations. If consumers tend to routinely shop with the same group of companions, then social norms to which members of the group adhere could be formed over time.

The relationship between the social and non-social tendencies and purchase behaviour is also likely to be influenced by self-regulation. Impulsive buying is often seen as a conflict between desire and self-control. Social encouragement is therefore an important facet of how consumers behave. As discussed above, consumers could find it more difficult to resist their impulsive urges while with others. However, the existence of the non-social impulsive buying tendency suggests that there are factors which act on self-control in individual shopping situations. Self-regulatory resources, which diminish over time, might be especially important in individual forms of shopping. Impulsive buyers who mainly shop alone will rely on their own self-control, as they experience no encouragement or discouragement from companions. However, the influence of sales-persons could be a particularly important factor for individual impulsive buyers. Regulation of impulsive urges

might also differ when regulating social encouragement rather than purely internal impulsive urges. For example, a consumer who impulsively shops both with others and while alone could find it more difficult to regulate their behaviour when alone because they do not have companions to discourage a purchase. The potential interaction between affect and social setting could also influence self-control. For example, consumers shopping alone could make decisions based on affect due to the low effort involved with an impulsive purchase.

7.4.2 Research contributions

The theoretical contributions indicate a number of key implications for research: firstly, researchers should consider using the social and non-social scales alongside a general impulsive buying tendency scale; secondly, field researchers should record the social setting in which their participants are shopping.

The most significant implication for research is the development of the valid and reliable social and non-social tendency scales. The lack of correlation between the *buying impulsiveness scale* and hypothesised behaviour in a social shopping setting, indicates that current research might not provide a full understanding of impulsive buying in social contexts. The social scale demonstrated a significant correlation with the social scenario and, therefore, appears to provide a unique contribution for future research of impulsive buying. However, the strong correlation between the non-social scale and the *buying impulsiveness scale* suggests that the non-social scale makes a less significant contribution. Furthermore, the non-social scale showed a weaker correlation with the outcome of the hypothesised non-social scenario than the *buying impulsiveness scale*. Accordingly, the results support the future application of the social scale in impulsive buying research, but the usefulness of the non-social scale is less clear at this stage. Future research into the non-social scale could help to establish whether its potential to measure the individual aspects of impulsive buying extends beyond the contribution made by the existing *buying impulsiveness scale*.

As I discussed in the methods and qualitative data collection chapters, the items on existing impulsive buying tendency scales relate to the general impulsivity and unreflectivity aspects of trait impulsive buying. Consequently, existing scales of trait impulsive buying (e.g., Verplanken & Herabadi, 2001; Weun, Jones & Beatty, 1998) do not take the social situation or the influence of shopping companions into account. The newly developed social and non-social scales are distinct from existing scales because the items relate to either social or individual shopping situations. The new scales will, therefore, enable researchers to investigate the social and individual impulsive buying habits of consumers, alongside a more general aspect as measured by existing scales, such as Rook & Fisher (1995).

As demonstrated by the nomological network analysis, the influence of antecedents may be either missed or misrepresented if the social and non-social elements of impulsive buying are not clearly measured. However, it is important to note that while social impulsive buying may be related to socialising, or social bonding, it cannot be measured purely by personality variables related to social factors, such as extraversion. Importantly, the correlation between extraversion and non-social impulsive buying tendency suggests that consumers may exhibit social behaviour, but still engage in non-social impulsive buying. Therefore, it is necessary to use a scale with items specifically relating to the social facets of impulsive buying.

Researchers should consider using the social scale alongside an existing measure of impulsive buying to ensure they accurately capture a consumer's usual behaviour. The previously unknown potential for introverts to engage in social forms of impulsive buying also suggests that there could be a need to revisit previous studies. For example, correlational analysis based on the general impulsive buying tendency scale might not be valid for social impulsive buyers, or for those who engage in both social and non-social impulsive buying. As I discussed earlier, there are also likely to be different emotional or personality

antecedents of social and non-social impulsive buying. Therefore, researchers could use the scales to develop a more comprehensive model of impulsive buying by considering the moderating influence of social context.

Researchers interested in conducting impulsive buying fieldwork should also consider recording the social context in which their participants are shopping. The social context can then be compared with the social and non-social tendencies of the participants. Researchers can then determine if each participant is, or is not, shopping in the context in which they are most impulsive in. The social context could then be used as a moderating influence in the relationship between the social and general impulsive buying tendency and behaviour. Recording the social context would also enable a more thorough examination of the influences on behaviour in social and non-social contexts.

7.4.3 Practice contributions

The thesis findings also have implications for retailers and marketers, and those supporting impulsive buyers to reduce their impulsive behaviour.

7.4.3.a Implications for marketers and retailers

The use of the social scale alongside a general impulsive buying tendency scale has clear practical use for marketers and retailers. Retailers could use the social impulsive buying and general impulsive buying scales to improve understanding of their customers. Such information could offer insights into the choice of particular environments for social or non-social impulsive buying. There may be environmental factors that reflect particular aspects of social or non-social shopping which can be enhanced, such as when shopping for social reasons. For example, if a retailer identifies that a significant percentage of their consumers are non-social impulsive buyers, they could then investigate what particularly attracts non-social impulsive buyers. The findings from the scale-development stage also indicate that consumers who are less frequently impulsive may be less concerned with the social setting

of their shopping experience; whereas, the more frequently impulsive may be more concerned with the social setting. Consequently, there may be difference antecedents related to shopping that affect consumers who are impulsive less often; but still engage in impulsive buying. Retailers could look for the types of impulsive buying antecedents that affect frequently or infrequently impulsive consumers to determine if there are ways to target consumers. For example, promotions or sales-person interaction may be more important to encourage consumers who are impulsive less often.

The interview analysis also indicated that the environment interacts with social situation to influence moods. Therefore, retailers could use the interaction between social setting and shopping environment to enhance a consumer's positive moods. Given the potential for browsing to influence impulsive urges, there are likely to be factors within the retail environment that are especially influential during social browsing. If retailers can emphasise these social aspects, they may be able to encourage social impulsive buyers to browse and thus experience more impulsive urges.

Future research to consider the personality of social and non-social impulsive buyers could also have implications for retailers. Should such studies establish that personality is less influential than social encouragement in social impulsive buying, then there could be potential for retailers to increase impulsive behaviour, e.g., through encouraging social shopping, or through highlighting sales-person interaction. For example, particular store environments could be designed to facilitate social interaction. However, if non-social impulsive buying is strongly related to a consumer's personality, then other aspects of non-social impulsive buying would need to be emphasised, such as encouraging browsing through store layouts.

Although I have focused on in-store rather than online impulsive buying, there are some potential implications for online retailers stemming from the interview analysis. In particular, shopping online was seen as less enjoyable than in-store shopping and less likely to lead to impulsive urges. Therefore, the enjoyment facet of online shopping may be a key factor of increasing impulsive urges. The social and non-social scales could also be of use for online retailers to investigate how social or non-social tendencies influence online behaviour. For example, there are likely to be elements of in-store shopping which are important for social and non-social tendencies and may be important to implement online, e.g., the enjoyable or immediate act of purchasing. Increasing the social elements of online shopping could also increase the likelihood of social impulsive buyers acting on impulsive urges.

7.4.3.b Implications for those supporting impulsive buyers

While impulsive buying is an enjoyable activity for many consumers, it can also increase the risk of financial hardship and can lead to guilt, shame and depressive episodes. As discussed previously, the social and non-social impulsive buying scales could be useful in identifying any negative outcomes associated with social or non-social impulsive buying tendencies. The scales could also be used to explore if the social context is associated with particular forms of impulsive buying used as regulation. For example, a field study could identify if social impulsive buyers, or non-social impulsive buyers, shopping alone tend to experience attempts to regulate their negative emotions.

Those attempting to help consumers with their impulsive buying behaviour can use information about how social and non-social impulsive buying affects outcomes to better target any intervention. If future research indicates that there is a pattern of impulsive buying associated with social or non-social impulsive buying, then specific advice can be provided about reducing impulsivity in social or non-social situations. The results of the nomological

network analysis and quasi-experiment suggest that acknowledging the social context of impulsive buying can lead to useful insights. Understanding of how the impulsive buying tendency differs across social situations will aid a process of exploring impulsive buying outcomes.

The potentially severe negative financial consequences of impulsive buying also suggest that policy makers could make use of the social and general impulsive buying tendency scales to identify the circumstances in which impulsive buying becomes an issue. If future research indicates that negative outcomes from impulsive buying tend to be associated with a particular context or occur due to repeated unsuccessful attempts to regulate emotion, then there could be a remit for policy makers to intervene. For example, the scales could be used to identify a consumer's usual social or non-social behaviour and the extent to which they are impulsive. Such information could then be used to provide advice to consumers with impulsive buying problems about reducing impulsive behaviour in social or non-social situations. However, without knowing more about how social factors affect outcomes it is difficult at this stage to suggest what form that advice should take.

The financial and psychological consequences of impulsive buying also present an ethical dilemma for retailers, particularly if the consequences are damaging for consumers. Therefore, identifying the circumstances in which impulsive buying becomes problematic can aid retailers who want to ensure their approach to targeting consumers is not unethical. For example, retailers could use the impulsive buying tendency scales to identify if their consumers are particularly susceptible to problematic impulsive buying and direct these consumers to relevant advice.

7.5 Limitations and future research

7.5.1 Limitations

While the results of the three stages of the project have important implications for both impulsive buying theory and future research, there are a number of study limitations that must be considered. Given the mixed methods design of the study, the imitations associated with each stage of data collection are addressed separately.

7.5.1.a Stage one: Qualitative interview limitations

There are four main limitations with the interviews, namely: social desirability and recalled behaviour; sampling; data interpretation; and generalisability. I consider these issues to be of roughly equal importance when reflecting on the qualitative interviews.

One of the main limitations with the qualitative stage is that the interviews were based on recalled rather than actual behaviour. Therefore, the participants could have misreported or simply forgotten about certain aspects of their shopping behaviour. The focus on social and emotional issues may also have exaggerated the importance of these issues. The negative social norms associated with impulsive buying (e.g., Rook & Fisher, 1995) might have influenced the participant responses (Black, 2008). Social desirability is likely to have particularly affected the discussion of impulsive buying outcomes, which are very personal in nature. As a consequence, some significant issues may have been missed. However, it is important to note that the use of a general opening prompt (i.e., “What is your usual shopping behaviour?”) was instrumental in reducing the likelihood of leading the participants. The participants were also later encouraged to elaborate on their personal experience of impulsive buying. Therefore, the interview data largely reflects issues that the participants felt were important to discuss. A number of issues arose during the interviews that would not necessarily have been captured had a closed-response questionnaire design been used.

The theoretical sampling approach applied to recruit participants is also likely to have resulted in sampling bias. The limited location from which the sample was drawn (staff and postgraduate students from the Open University in Milton Keynes) could have led to homogeneity of behaviours or responses. Therefore, the data may reflect the behaviour of particular types of consumer rather than the wider group of impulsive buyers in the population. However, I also used data, rather than participant saturation, which ensured enough data were collected to sufficiently address my research question. Furthermore, no undergraduate students were recruited to take part in the research. Consequently, the issues associated with using undergraduate students that were discussed in the *methods* chapter do not apply.

My analysis and interpretation of the data could have been biased due to my background and project focus. The interview prompts were designed to provide freedom for the participants, but there was still a particular focus on social and emotional issues. Accordingly, I performed both semantic and latent level analysis of the data to identify categories, but with a focus on the social and emotional factors. The analysis relied on my subjective interpretation of the data, which was informed by the literature review. A researcher approaching the topic from a different perspective may have interpreted some of the data (for example, the importance of social issues) in a different manner. However, I took steps to reduce misinterpretation of the data by searching for disconfirming data and discussing my analysis with a third party (i.e., my supervisors). I also used both theoretical and inductive approaches to explore the data and identified categories beyond social and emotional factors. Nevertheless, the interpretation of the interview analysis could have been different had I applied a different theoretical framework to my project.

The final limitation of the interview stage is the lack of generalisability of the findings. As discussed in the *methods* chapter, there is considerable discussion around the

generalisability of qualitative data. Some researchers argue that any attempts to extrapolate qualitative results to other groups must be treated with caution (Saunders, Lewis & Thornhill, 2009). Others argue that it is theoretical generalisability, rather than generalisability to a population, that is key for qualitative research (e.g., Lincoln & Guba, 1985a). As I applied a pragmatic framework, I took a consistent approach to ensuring validity in both the qualitative and quantitative phases of my research. The interview stage was used to inform the direction of the project and as a separate source of data. Therefore, while the typical issues associated with generalising from qualitative samples to the wider population apply, they are mitigated by how the data were used for theory generation. I then tested the generated theory on a more representative sample.

7.5.1.b Stage two: Scale development limitations

There are two main limitations of the scale development stage, namely: the sampling across both phases and associated generalisability; and the limited analysis of the nomological network.

The major limitation of the scale development is the choice of sampling methods and the generalisability issues stemming from the use of these methods. I used theoretical sampling for phase one of scale development and requested participants who had made “purchases they had not intended to”. The resulting high levels of impulsive buying reported by the sample is likely to have affected the responses to the newly developed social and non-social impulsive buying tendency items. As a result, the item-construct correlations and the inter-construct correlations could have been affected. For example, during phase one of the scale development, the social and non-social constructs showed a negative correlation during the initial analysis. However, further analysis of the social and non-social constructs indicated that the negative correlation was related to the relatively strong general impulsive buying tendency of the sample.

I selected a more representative sample for phase two of the scale development, to address the limitations of phase one. However, there were also some limitations with the phase two sampling: firstly, the sampling method was not entirely random as it relied on people who had voluntarily signed up to a general consumer panel. While online research can result in more representative samples than traditional methods (e.g., Paolacci, Chandler & Ipeirotis, 2010), online non-probability methods still suffer from issues of generalisability. As I discussed earlier, probability sampling for consumer research was beyond the scope of my study due to the difficulties with random sampling of impulsive buyers (e.g., Lynch, 1982). Nonetheless, when reviewing the scale development results, the non-random nature of the sampling should be considered. Consequently, it will be useful to test the scales in a future study on a larger, and if possible, random sample (see section 7.5.4). Secondly, both the phase one and phase two samples were collected from individualist cultures. Previous research indicates that consumers from collectivist and individualist cultures differ in their impulsive buying tendencies (e.g., Kacen & Lee, 2002). Therefore, the scale may be less applicable to non-individualist cultures, which limits the application of the scales without furthering testing. Thirdly, the phase two data was collected using a web panel service. Although online samples have been shown to be representative in terms of age, race and gender, there is still a bias against people who do not use the internet. However, it is important to note that the phase two sample was not selected on the basis of any particular impulsive buying characteristics. The phase two sample was also roughly 50% male and 50% female allowing a valid examination of gender differences, with the consequence that the scales were shown to be valid for both men and women.

The scale development analysis was also affected by the nomological network analysis. I limited my analysis of related scales to the Big-Five, general impulsivity and the *buying impulsiveness scale*. I selected Rook and Fisher's scale (1995) for analysis based on

the popularity of the scale. However, I did not explore the relationship between the social and non-social scales and the cognitive and affective constructs of the impulsive buying tendency advocated by some researchers (Verplanken & Herabadi, 2001; Verplanken, Herabadi, Perry & Silvera, 2005). Current research indicates that the cognitive and affective components share different correlations with personality facets (Verplanken & Herabadi, 2001). I selected a small number of scales to test alongside the new scales to ensure the process was not too lengthy. Adding more scales would have increased the potential for the participants to lose interest, which would have severely affected the validity of the analysis. Nevertheless, future research is necessary to explore the relationship between the social and non-social scales, and the cognitive and affective sub-scales.

7.5.1.c Stage three: Quasi-experiment limitations

There are two main limitations with the quasi-experiments, namely: the use of hypothesised behaviour; and sampling and generalisability.

The main limitation with the quasi-experiment is the use of hypothesised and recalled behaviour. I used the hypothesised design to ensure that each participant responded to both the social and non-social situations. While the scenario approach allows participants to answer free from social normative judgements, which may increase the internal validity of the study (Rook & Fisher, 1995), there is significantly reduced ecological validity compared with field research. Consequently, the participants' behaviour in a real-world shopping situation may not necessarily align with the results of the quasi-experiment. For example, there could be environmental influences that strongly impact on real-world behaviour. Furthermore, there may have been priming effects despite the 24 hour gap between the participants completing the scales and the scenarios (e.g., Wiggs & Martin, 1998). There is therefore a possibility that participants may have recalled their answers to the social or non-social scales and answered accordingly. However, the 24 hour gap did prevent the

participants from seeing the scenarios immediately after the scale and helped to reduce very strong priming effects.

The convenience sampling of the participants also affects the generalisability of the quasi-experiment results. The participants were recruited using the Open-University intranet, which may have resulted in similar bias to that discussed for the qualitative stage. There are also issues with the gender characteristics of the sample, as the sample comprised mainly females. Although a bias towards female participants is typical in impulsive buying research (e.g., Beatty & Ferrell, 1998; Hausman, 2000; Youn & Faber, 2000), it can still impact on the results. During the quasi-experiment the male sample group was too small for meaningful analysis. Consequently, the lack of male participants' means there is less confidence in the predictive validity of the scales for men. Therefore, further research using the scales in a real-world shopping environment would be beneficial to test the predictive validity of the scales and to address the sampling gender bias.

7.5.2 *Future research directions*

In addition to addressing the above limitations, there are a number of interesting and potentially important results that would benefit from further study. I have identified four broad categories of research that could be used to explore the impulsive buying process using the social and non-social scales; firstly, studies of real-world behaviour using the social and non-social scales could help to test the scale's predictive validity. Such studies could also usefully address the gender imbalance of the quasi-experiment. Secondly, researchers could re-examine and update earlier studies of impulsive buying by including a social impulsive buying measure. Thirdly, researchers could explore the interaction between social factors and affect in more detail. Finally, new studies could explore the outcomes of impulsive buying in more detail using the social and general impulsive buying tendency scales as a starting point.

As the data relating to the predictive validity of the scales is based on hypothesised behaviour, future research should be conducted to explore the social and non-social scale in a real-world setting. Such a study could take the form of asking participants to indicate pre-shopping intentions and complete the social and general impulsive buying tendency scales. The participants could then be asked to record the social setting of their purchasing and record actual purchasing behaviour. The social context could then be compared with the tendencies of the consumers to determine if the social and non-social scales correlate with actual behaviour. A real-world study would also be useful to explore how variables affect any interaction between the social and non-social tendencies, and impulsive behaviour. A field study of impulsive buying would also provide the opportunity to address the gender imbalance from stage three of the research, and would enable the predictive validity of the scales for men to be considered. Questions about whether the scales are valid in non-western contexts, or whether differences in social and general impulsive buying tendencies exist, could be addressed by examining both collectivist and individualist cultures.

As the most significant project implication indicates that the general impulsive buying tendency is not stable across social situations, further research is necessary to re-visit current impulsive buying knowledge. Such research could be used to build upon existing models of impulsive buying (e.g., Beatty & Ferrell, 1998) and to develop a new understanding of situational impulsive buying antecedents. I consider it would be most beneficial to initially revisit some of the more frequently cited impulsive buying antecedents with the social scale. The lack of correlation between extraversion and social impulsive buying indicates a lack of understanding of important interactions. Other variables previously shown to correlate with the general impulsive buying tendency may exert less, or more influence, on social or non-social forms of impulsive buying. For example, the results of Pine and Fletcher's (2011) study on menstrual cycles and impulsive buying could be

revisited to determine how their results fit within social theories of impulsive buying. Such studies should probably be completed using similar methods are used to those originally used to gather the data.

Future research should also consider exploring how environmental factors interact with the social situation. I did not measure environmental factors during my study, yet these factors are likely to interact with the social and general impulsive buying tendency to influence how and when consumers experience urges. For example, consumers in a shopping centre could be asked to complete the social, non-social and general impulsive buying tendency scales and also a measure of pre-shopping intention. An accompanied shop could then be carried out to determine how social or contextual (e.g., the store layout) variables act on the consumer. Using an accompanied shop will ensure that actual impulsive behaviour is identified. The relationship between the impulsive buying tendency scales and impulsive buying could then be analysed using the social setting and environment as moderating factors.

The social scale will also be useful to examine current ambiguities in the knowledge of impulsive buying and affect. Further research into the role of affect during social or non-social shopping situations will enable a more complete understanding of the entire impulsive buying process. Some form of observation method would be useful for a study of social and affect interaction, where impulsive buyers are followed through each stage of their impulsive behaviour. Following an impulsive buyer would avoid the problems of using reported behaviour and enable a more detailed understanding to be developed of how affect influences impulsive urges while shopping. However, there are likely to be difficulties in observing impulsive buyers while shopping alone and with others. Therefore, a preliminary study in which pre and post-shopping measures of affect are used alongside measures of social context and impulsive buying tendency could be helpful. Although there are method issues

with using recalled affect, such as study could provide enough information to guide a more extensive exploration of social and affect interaction.

There could also be value in using the social and non-social scales in studies of impulsive buying outcomes. Qualitative studies of outcomes would allow thematic analysis that could be used to develop a deeper understanding of this issue. The use of friendship pairs or group interviews to explore outcomes could also provide useful insights into the social aspects of impulsive buying. Subsequent research could then be used to build on the knowledge of the social-affect interaction to explore if outcomes are associated with particular social situations or emotional facets. If the qualitative data suggests particular associations between outcomes and social or non-social impulsive buying, then these facets could be further explored in a larger quantitative study. Alternatively, a multi-stage qualitative study could be used with interviews used to identify general issues followed by accompanied shops to explore key issues in a real-world setting.

7.6 Summary

The project results indicate that the current understanding of the impulsive buying tendency is incomplete. Trait impulsive buying appears to have social and non-social aspects and thus consumers exhibit social and non-social impulsive buying tendencies. The social and non-social forms of the impulsive buying tendency can be measured by two reliable and valid scales that correlate with hypothesised behaviour. The scales also demonstrate expected convergent properties with impulsivity traits. The scales will be useful for researchers seeking to explore social aspects of impulsive buying and for retailers who want to understand more about their customers. Given potential negative connotations of the “non-social label, it may be worthwhile re-labelling this facet as the “individual” impulsive buying tendency. The scales could be of use to further understand of impulsive buying and help those consumers who suffer negative consequences from their behaviour. The social scale

in particular appears to make an especially important contribution to theory and research for use alongside an existing measure of the general impulsive buying tendency to capture a consumer's usual behaviour.

8. References

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9. Appendices

Appendix 1: Qualitative participant age and gender details

Gender	Age
Female	35-44
Female	25-34
Female	45-54
Male	25-34
Male	45-54
Female	25-34
Female	45-54
Male	35-44
Female	35-44
Male	35-44
Female	25-34
Male	25-34
Female	45-54
Female	35-44
Female	25-34
Female	35-44
Female	45-54
Female	25-34
Female	35-44
Female	35-44
Female	45-54
Female	55-64
Female	35-44
Male	55-64
Female	45-54

Appendix 2: Qualitative information sheet

Information sheet - Consumer behaviour study: Lead researcher Matthew Shawcross

Thank you for your interest in my research, this project is part of the Ph.D I am studying towards at the Open University. The study is investigating consumer shopping behaviour with the aim of understanding more about influences on behaviour. In order to investigate this issue I will be conducting a number of interviews

Please read the following information and find my contact details along with those of my supervisors below

Once you have completed the short survey you will be contacted to discuss an interview date and location, the details of this interview are below. You will be able to read this information sheet again before the interview and will be provided with a printed consent form to complete.

Interview details

- You will engage in a short interview with me that will last approximately 20-30 minutes and I will ask a number of questions about your shopping behaviour
- The interviews will be recorded on a handheld recording device and will be transcribed following the interview. The recordings will be deleted following transcription and the transcribed interview will be stored as detailed below.

Confidentiality of your information

- All participant information will be fully confidential and will be used only for academic purposes. Participant data will be stored using numbers and not identifying information
- The data from the consent forms will be used to ensure all participants have given informed consent
- The study fully complies with the data protection and freedom of information acts
- Once the study is fully completed the consent forms will be destroyed thereby rendering all data completely anonymous
- All interview data will be securely stored using only your unique number (printed on the consent form) as the identifying information; this number will be used to identify your data from the consent forms if you wish to withdraw from the study.
- The consent forms will be securely stored in a separate physical location from the interview data

How to withdraw your information

- You are free to withdraw at any point of the study or to withdraw your data once you have completed the interview, with no negative consequences for you
- If you want to withdraw your data from the study you may contact me using the contact details below, with the instructions to remove your data along with either your unique number (provided on the consent form) and I will promptly delete it.
- Please note, after 6 months the data will be completely anonymised so please contact me before this time if you want to withdraw your data.

Contact details

- The results of the study will be available to all participants once the study has been completed; again this may be requested using my email or postal address
- If you have any further enquiries about the project please contact matthew.shawcross@open.ac.uk or Matthew Shawcross, Open University Business School, Walton Hall, MK7 6AA, 01908 655019. If you wish to speak to someone other than the researcher then you may use the following:
Mark Fenton-O'Creevy: m.p.fentonocreevy@open.ac.uk or Phil Bates: pdh296@openmail.open.ac.uk both at Open University Business School, Walton Hall, MK7 6AA, 01908 655 888

Appendix 3a: Social item provenance

Item	Source
S-IB1: When shopping with others I tend to buy spontaneously	Item one was formed based on discussion with the participants who described shopping with friends or family as increasing their levels of impulsive buying. For example, one participant suggested <i>"I think it is a very different dynamic when you are with other people"</i> . The item wording was based on existing scale item BIS1: "I often buy things spontaneously".
S-IB2: When I go shopping with other people I buy things that I had not intended to purchase	Item two reflects the lack of intention to buy as discussed by all of the impulsive buyers in the interviews. I incorporated a phrase from the existing scale item I-IBT1: "I usually only buy things that I had not intended to purchase" but also defined this as occurring in a social context.
S-IB3: Most of my unplanned purchasing happens when I shop with other people	I drafted item three to reflect the types of buying tendency discussed by the social impulsive buyers, who described their impulsive buying as mostly situated in a social context, e.g., <i>...with friends it is a proper shop till you drop day... and I probably shop a bit more frivolously.</i> The wording was adapted from existing scale item I-IBT2: "I am a person who makes unplanned purchases".
S-IB4: "Just do it" describes me when shopping with other people	I used a phrase in the Rook and Fisher (1995) scale (BIS: <i>"Just do it" describes the way...</i>) but adapted this to reflect the social elements of the shopping experience
S-IB5: I buy more spur-of-the-moment items if I am shopping with other people	I drafted item five to reflect the immediate but also social aspects of the impulse buying tendency, for example <i>"...you will have a wander before you know where you are, because someone said 'oh that will look nice on you'"</i> . I used existing item BIS6 (<i>"Sometimes I like buying things on the spur-of-the-moment"</i>) as a guide for the wording.
S-IB6: Shopping with others can lead to buying items without thinking	Item six reflects the important "unreflective" nature of impulsive buying but from within a social setting as described by the participants, e.g., <i>"...and hence you might see something you weren't really looking for and didn't think you wanted to buy"</i> and is based off existing scale item IBTS10: "I often buy things without thinking"
S-IB7: I have bought nice things to cheer myself up when shopping with others	This item reflects the affective nature of impulsive buying and the type of "cheer up" shopping described by many of the interview participants, for example <i>"... cheer me up shopping ..."</i> The wording of the item relates to the existing scale item: IBTS16: "I always see something nice when I pass by shops"
S-IB8: I end up making more rash purchases if I am out with other people	Item eight refers to the immediate aspects of impulsive buying but situates this in a social context and by using existing scale items: IBTS19: "I am a bit reckless in buying things" & BIS9: "Sometimes I am a bit reckless about what I buy" as a guide.
S-IB9: I tend to be a bit reckless if I shop with other people	Item nine also refers to the immediate nature of impulsive buying, and also reflects the social context. BIS9: "Sometimes I am a bit reckless about what I buy"
S-IB10: I sometimes regret purchases I make after shopping with others	The potential for guilt or regret after purchase was discussed by some of the interview participants and item ten was drafted to incorporate the potential for the social setting to influence this. IBTS13: "I sometimes feel guilty after having bought something"
S-IB11: If I am shopping with others I tend to be in a good mood	The interview participants who discussed social impulsive buying tended to describe the social setting as related to positive moods, e.g., <i>"...but it is kind of talks yourself out of the bad mood when you are with someone else"</i> , thus item 11 refers to the positive nature of social shopping
S-IB12: My shopping with other people tends to be more spur-of-the-moment	As with item five, item 12 reflects the more immediate nature of impulsive buying with others but within a social context, for example, BIS6: "Sometimes I feel like buying things on the spur-of-the-moment"
S-IB13: I don't like buying items to cheer myself up if I am with other people	Item 13 relates to the more positively driven nature of social forms of impulsive buying as discussed by the interview participants, for example, <i>"...but it is kind of talks yourself out of the bad mood when you are with someone else"</i> .
S-IB14: If I go shopping with others I purchase fewer unplanned items	Item 14 reflects the unplanned nature of impulsive buying, but from a social perspective and negatively worded as used by existing scale items, e.g., IBTS4: "Most of my purchases are planned in advance"
S-IB15: When shopping with other people I will stick more to a plan	As above, item 15 reflects the negatively worded nature of some existing scale items, BIS8: "I carefully plan most of my purchases"
S-IB16: I am more cautious when shopping with others	Item 16 reflects the types of behaviour discussed by the non-social participants, who considered their shopping to be less impulsive with others and is adapted from existing scale item IBTS8: "Before buying I always carefully consider whether I need it"

Shopping is more fun with other people than alone*	These five items were drafted but removed following the pilot. All four items were drafted to reflect a change in behaviour from or distinction between shopping alone to shopping with other people. However, these items were described as confusing by the pilot participants. For example, the first of the removed items refers to the fun aspects of shopping with others, as discussed by a number of the participants.
My usual behaviour changes when I shop with other people*	
I regret more purchases that I make after shopping with other people*	
Shopping is more fun with other people than alone*	
Shopping with others is a more positive experience than by myself*	
*items removed after piloting and were not used in the study	
BIS = Buying impulsiveness scale (Rook & Fisher, 1995), I-IBT = Impulsiveness- impulse buying tendency (Weun, Jones & Beatty, 1998), IBTS = Impulse buying tendency scale (Verplanken & Herabadi, 2001).	

Appendix 3.b: Non-social item provenance

Item	Source
NS-IB1: I am more spontaneous when shopping alone	Item one is based on the discussions with the non-social interview participants, who described their impulsive behaviour as occurring mainly while shopping alone, e.g., " <i>if I am on my own, I tend to buy more</i> ". The item was also based on the existing scale item BIS1: "I often buy things spontaneously".
NS-IB2: I will be more reckless when shopping alone	Item two refers to the immediacy of the impulsive purchase as defined by Rook and Hoch (1985) and also reflects the potential for this immediate behaviour to occur most frequently while alone. The item is adapted from existing scale item BIS9: "Sometimes I am a bit reckless about what I buy".
NS-IB3: If I shop alone I can be myself	Many of the non-social impulsive buyers felt that shopping with other people was less enjoyable as they had to change their behaviour, e.g., " <i>I think people shop at different rates or they spend times with different things, so it easier to do on your own</i> ". Item three, therefore, refers to consumers shopping alone being able to act more freely.
NS-IB4: Spur-of-the-moment purchases tend to happen when I am alone	Item four reflects the "immediate" nature of the impulse buy, but from within a social context. As with the social items, I used existing item BIS6 ("Sometimes I like buying things on the spur-of-the-moment") as a guide for the wording.
NS-IB5: I feel more comfortable buying items I haven't planned to buy when I am alone	Similar to item three, item five relates to my discussion with the non-social interview participants who felt that non-social forms of shopping provided more freedom to act impulsively.
NS-IB6: A trip to the shops results in more spontaneous purchases if I am alone	Item six reflects the spontaneity involved with impulsive purchasing, but from a non-social perspective, e.g., " <i>I go shopping with other people but I don't tend to buy anything</i> ". Again, this item was based on existing scale item BIS1: "I often buy things spontaneously".
NS-IB7: Shopping alone leads to more unplanned purchasing	Item seven was included in the item pool to reflect the types of unplanned behaviour while shopping alone discussed by the non-social participants. As with the similar social item, the wording was adapted from existing scale item I-IBT2: "I am a person who makes unplanned purchases".
NS-IB8: I sometimes regret unplanned purchases I have made when shopping alone	Some of the non-social participants discussed the regret or guilt stemming from their impulsive behaviour while shopping alone, and item eight reflects this. I adapted the wording from existing scale item IBTS13: "I sometimes feel guilty after having bought something".

NS-IB9: I tend to be more controlled with my purchasing when I shop on my own	Item nine is a negatively worded item to reflect the less impulsive nature of shopping alone as described by some of the social interview participants. This item is adapted from existing scale item negatively worded as used by existing scale items, e.g., IBTS4: "Most of my purchases are planned in advance"
NS-IB10: I will carefully plan what I am going to buy if I will be shopping alone	Item ten also reflects the more planned nature of non-social shopping for some of the participants. This item is adapted from existing scale item BIS8- "I carefully plan most of my purchases".
NS-IB11: When I shop alone I will be considered with my purchasing	As with items nine and ten, item 11 reflects the more planned nature of impulsive buying for some consumers who shop alone. I worded this item to have a similar sense to the existing scale item IBTS8 "Before I buy something I always carefully consider whether I need it" but including the social setting.
NS-IB12: I stick to a plan when shopping alone	Item 12 reflects the unplanned nature of impulsive buying from a non-social perspective, similar to existing scale item I-IBTS "I avoid buying things that are not on my shopping list"
NS-IB13: I avoid buying unplanned items when I go to the shops by myself	Item 13 again reflects the unplanned aspects of impulsive buying, but from a purely non-social perspective. Adapted from existing scale item . I worded this item to have a similar sense to the existing scale item IBTS1 "I usually think carefully before I buy something" but including the social setting.
NS-IB14: Shopping alone in a bad mood can lead to buying items without thinking	Item 14 refers to the affective aspect of the impulsive purchase but from within a non-social setting as discussed by many of the interview participants, for example: <i>"The times where I go shopping on my own I think is when I need to cheer myself up, or is that it is more impulsive, yes it is that mood altering side of it"</i> This item is adapted from existing scale item "BIS3 "I often buy things without thinking"
NS-IB15: If I want to buy something to cheer myself up I prefer to be alone	Many of the participants discussed non-social shopping as having potential negative affective components, and item 15 reflects this. For example, one participant suggested <i>"if I am in a bad mood on my own then oh yeah I will get that"</i> when talking about negative moods and buying.
I shop differently when alone than when I am with other people	As with the social items removed following the pilot, the removed non-social items relate to the some distinction between social and non-social shopping or a behaviour change. I drafted these items to reflect the potential for consumers to alter their behaviour while shopping alone or with others, but the pilot participants were confused about the wording.
I am cautious with what I buy when I shop alone than with others*	
I stick with a plan more when I am shopping by myself*	
I don't like shopping by myself compared with shopping with others*	
I prefer to be spontaneous when shopping with other people rather than alone*	
*items removed after piloting and were not used in the study	
BIS = Buying impulsiveness scale (Rook & Fisher, 1995), I-IBT = Impulsiveness- impulse buying tendency (Weun, Jones & Beatty, 1998), IBTS = Impulse buying tendency scale (Verplanken & Herabadi, 2001).	

Appendix 3c: Full and modified item pool

<i>Social items</i>	<i>Non-social items</i>
<i>S-IB1-</i> When shopping with others I tend to buy spontaneously	<i>NS-IB1-</i> I am more spontaneous when shopping alone
<i>S-IB2-</i> When I go shopping with other people I buy things that I had not intended to purchase	<i>NS-IB2-</i> I will be more reckless when shopping alone
<i>S-IB3-</i> Most of my unplanned purchasing happens when I shop with other people	<i>NS-IB3-</i> If I shop alone I can be myself
<i>S-IB4-</i> "Just do it" describes me when shopping with other people	<i>NS-IB4-</i> Spur-of-the-moment purchases tend to happen when I am alone
<i>S-IB5-</i> I buy more spur-of-the-moment items if I am shopping with other people	<i>NS-IB5-</i> I feel more comfortable buying items I haven't planned to buy when I am alone
<i>S-IB6-</i> Shopping with others can lead to buying items without thinking	<i>NS-IB6-</i> A trip to the shops results in more spontaneous purchases if I am alone
<i>S-IB7-</i> I have bought nice things to cheer myself up when shopping with others	<i>NS-IB7-</i> Shopping alone leads to more unplanned purchasing
<i>S-IB8-</i> I end up making more rash purchases if I am out with other people	<i>NS-IB8-</i> I sometimes regret unplanned purchases I have made when shopping alone
<i>S-IB9-</i> I tend to be a bit reckless if I shop with other people	<i>NS-IB9-</i> I tend to be more controlled with my purchasing when I shop on my own
<i>S-IB10-</i> I sometimes regret purchases I make after shopping with others	<i>NS-IB10-</i> I will carefully plan what I am going to buy if I will be shopping alone
<i>S-IB11-</i> If I am shopping with others I tend to be in a good mood	<i>NS-IB11-</i> When I shop alone I will be considered with my purchasing
<i>S-IB12-</i> My shopping with other people tends to be more spur-of-the-moment	<i>NS-IB12-</i> I stick to a plan when shopping alone
<i>-IB13-</i> I don't like buying items to cheer myself up if I am with other people	<i>NS-IB13-</i> I avoid buying unplanned items when I go to the shops by myself
<i>S-IB14-</i> If I go shopping with others I purchase fewer unplanned items	<i>NS-IB14-</i> Shopping alone in a bad mood can lead to buying items without thinking
<i>S-IB15-</i> When shopping with other people I will stick more to a plan	<i>NS-IB15-</i> If I want to buy something to cheer myself up I prefer to be alone
<i>S-IB16-</i> I am more cautious when shopping with others	
Items removed after pilot	
I shop differently when alone than when I am with other people	Shopping is more fun with other people than alone
My usual behaviour changes when I shop with other people	I am cautious with what I buy when I shop alone than with others
I regret more purchases that I make after shopping with other people	I stick with a plan more when I am shopping by myself
Shopping is more fun with other people than alone	I don't like shopping by myself compared with shopping with others
Shopping with others is a more positive experience than by myself	I prefer to be spontaneous when shopping with other people rather than alone

Appendix 4: Buying impulsiveness scale (Rook & Fisher, 1995)

Please indicate the extent to which you agree with the following statements using the strongly disagree to strongly agree rating scale.

Please read each statement carefully, and then fill in the option that corresponds with your agreement on the scale.

BIS1-I often buy things spontaneously

BIS2-"Just do it" describes the way I buy things

BIS3-I often buy things without thinking

BIS4-"I see it, I buy it" describes me

BIS5-"Buy now, think about it later" describes me

BIS6-Sometimes I feel like buying things on the spur-of-the-moment

BIS7-I buy things according to how I feel at that moment

BIS8-I carefully plan most of my purchases*

BIS9-Sometimes I am a bit reckless about what I buy

*Reverse coded item

Appendix 5: Scale-development information sheet

Information sheet - Consumer behaviour study: Lead researcher Matthew Shawcross

Thank you for your interest in my research, this project is part of the Ph.D I am studying towards at the Open University. The study is investigating consumer shopping behaviour, with the aim of understanding more about influences on behaviour. In order to investigate this issue I am developing a questionnaire to measure aspects of impulsive behaviour.

Please read the following information and find my contact details along with those of my supervisors below. Before you begin the process you will be asked to indicate your consent to take participate. Please save a copy of this information sheet so you may contact me for any reason.

Questionnaire details

- The questionnaire will ask general questions about shopping behaviour, no individual information will be used and the results will be presented as a whole.
- There are also questions relating to age and gender.
- The process should last approximately 10-15 minutes

Confidentiality of your information

- All participant information will be fully confidential and will be used only for academic purposes. Participant data will be stored using numbers and not identifying information
- The consent you provide will only be used to prove all participants have given informed consent
- The study fully complies with the data protection and freedom of information acts
- All questionnaire data will be securely stored using only your unique identifying number (that you will be provided with at the end of the study) as the identifying information.

How to withdraw your information

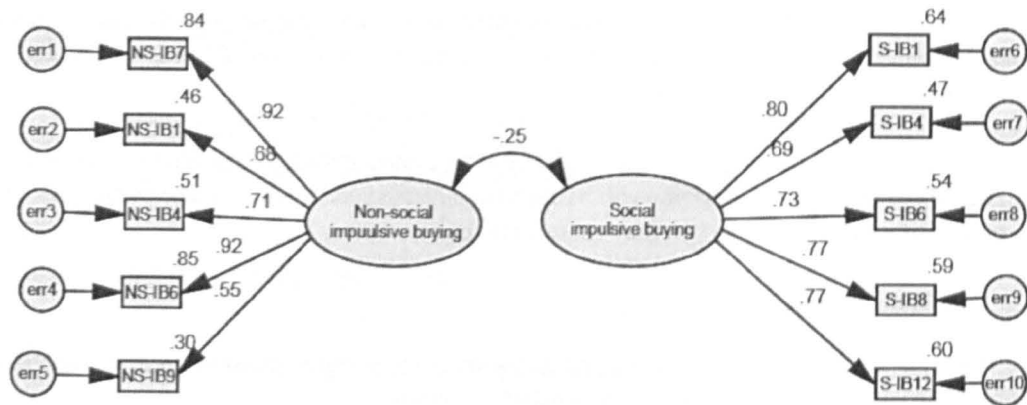
- You are free to withdraw at any point of the study or to withdraw your data once you have completed the questionnaire, with no negative consequences for you
- If you want to withdraw your data from the study you may contact me within 6 months using the contact details below, with the instructions to remove your data along with either your unique number and I will promptly delete it.
- Please note, after 6 months the data will be completely anonymised so please contact me before this time if you want to withdraw your data.

Contact details

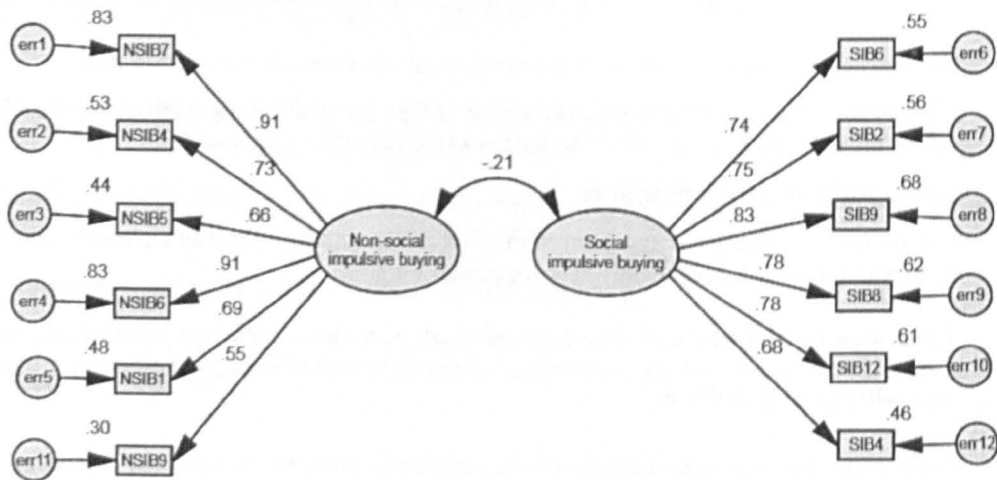
- The results of the study will be available to all participants once the study has been completed; this may be requested using my email or postal address
- If you have any further enquiries about the project please contact matthew.shawcross@open.ac.uk or Matthew Shawcross, Open University Business School, Walton Hall, MK7 6AA, 01908 655019 if you wish to speak to someone other than the researcher then you may use the following:
Mark Fenton-O'Creevy: m.p.fentonocreevy@open.ac.uk or Phil Bates:
pdb296@openmail.open.ac.uk both at Open University Business School, Walton Hall, MK7 6AA, 01908 655 888

Appendix 6: Expanded scale development from phase one

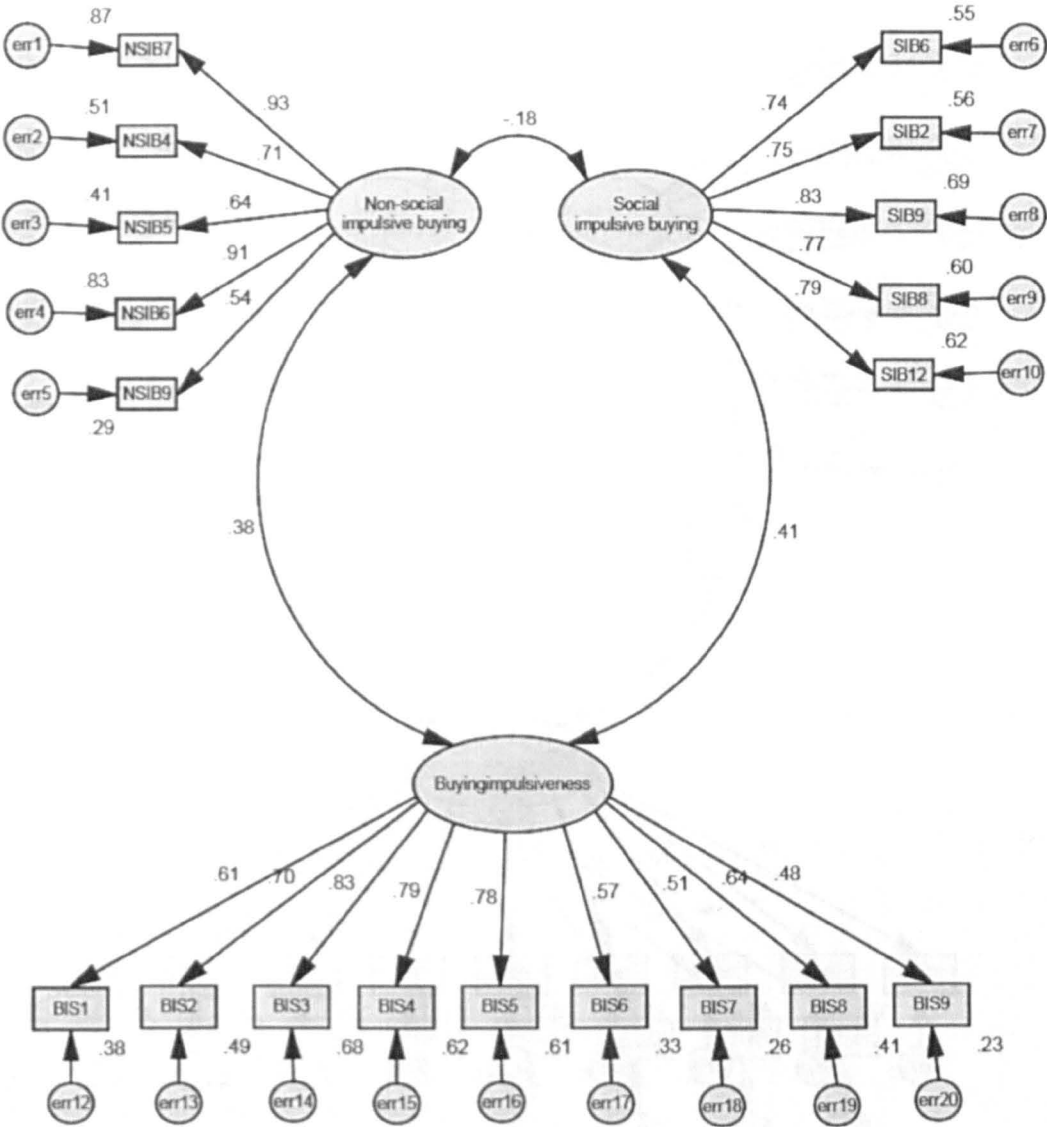
6.1 Measurement model two



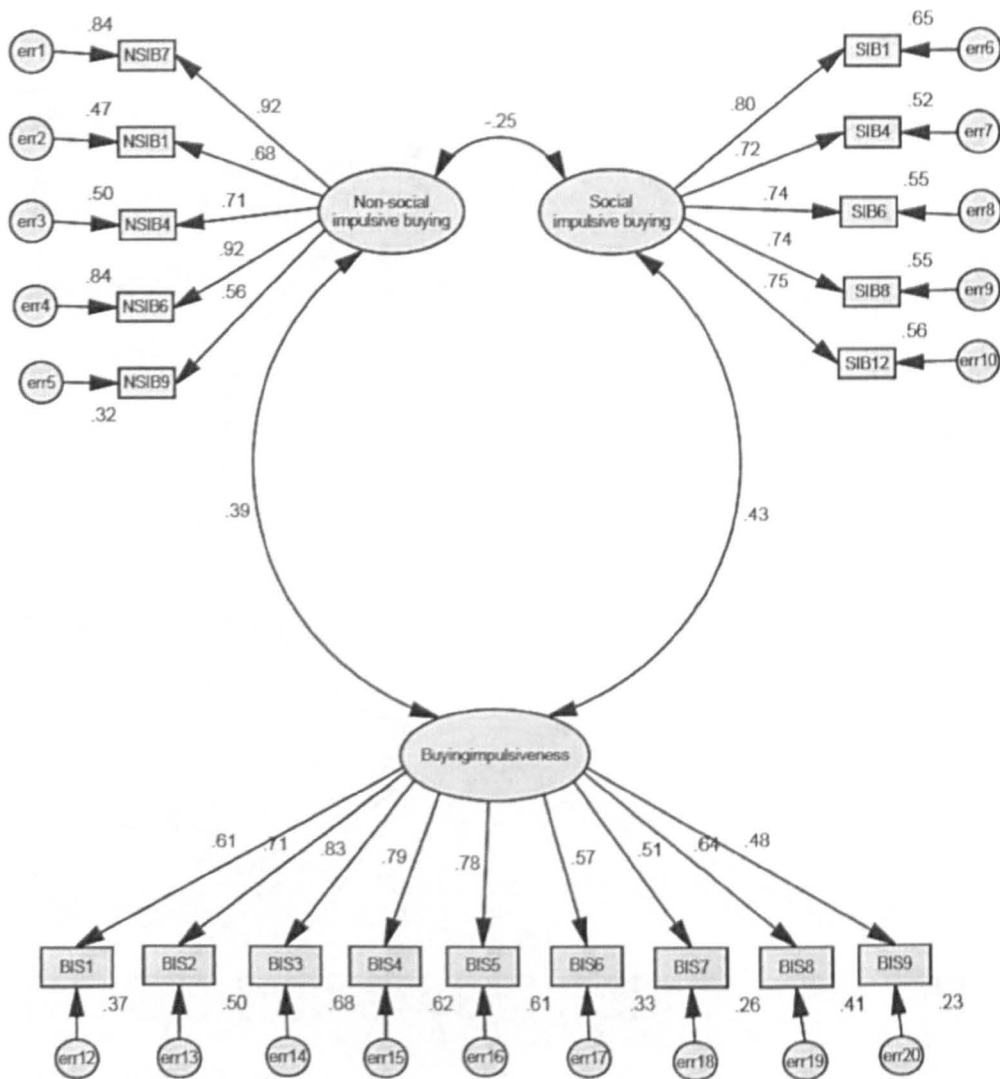
6.2 Measurement model three



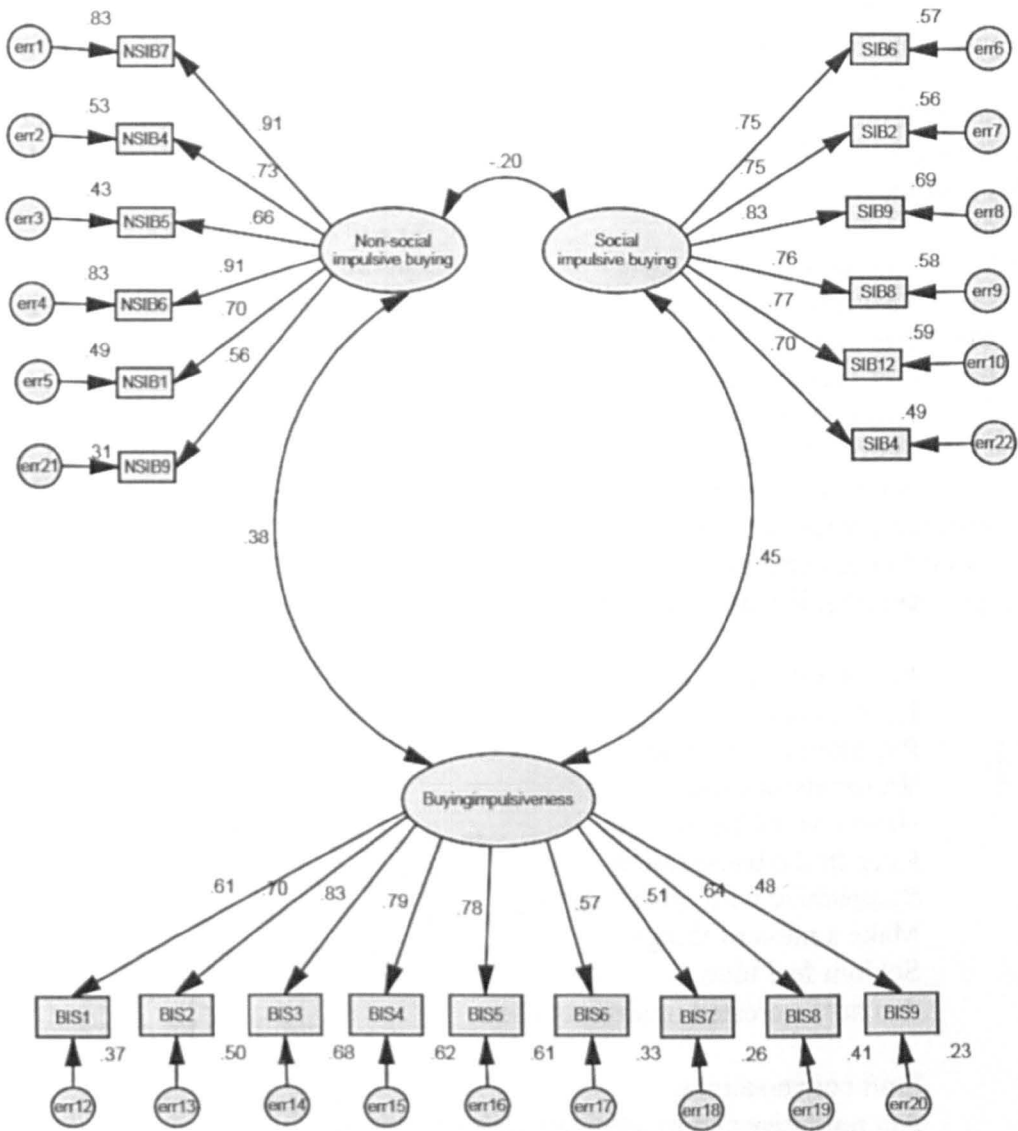
6.3 Social, non-social and *buying impulsiveness* scale model one



6.4 Social, non-social and *buying impulsiveness* scale model two



6.5 Social, non-social and *buying impulsiveness* scale model three



Appendix 7: Big-Five and Barratt impulsivity scales

IPIP Big-Five factor markers

How Accurately Can You Describe Yourself?

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Indicate for each statement whether it is 1. Very Inaccurate, 2. Moderately Inaccurate, 3. Neither Accurate Nor Inaccurate, 4. Moderately Accurate, or 5. Very Accurate as a description of you.

- | | | |
|-----|--|------|
| 1. | Am the life of the party. | (1+) |
| 2. | Feel little concern for others. | (2-) |
| 3. | Am always prepared. | (3+) |
| 4. | Get stressed out easily. | (4-) |
| 5. | Have a rich vocabulary. | (5+) |
| 6. | Don't talk a lot. | (1-) |
| 7. | Am interested in people. | (2+) |
| 8. | Leave my belongings around. | (3-) |
| 9. | Am relaxed most of the time. | (4+) |
| 10. | Have difficulty understanding abstract ideas. | (5-) |
| 11. | Feel comfortable around people. | (1+) |
| 12. | Insult people. | (2-) |
| 13. | Pay attention to details. | (3+) |
| 14. | Worry about things. | (4-) |
| 15. | Have a vivid imagination. | (5+) |
| 16. | Keep in the background. | (1-) |
| 17. | Sympathize with others' feelings. | (2+) |
| 18. | Make a mess of things. | (3-) |
| 19. | Seldom feel blue. | (4+) |
| 20. | Am not interested in abstract ideas. | (5-) |
| 21. | Start conversations. | (1+) |
| 22. | Am not interested in other people's problems. | (2-) |
| 23. | Get chores done right away. | (3+) |
| 24. | Am easily disturbed. | (4-) |
| 25. | Have excellent ideas. | (5+) |
| 26. | Have little to say. | (1-) |
| 27. | Have a soft heart. | (2+) |
| 28. | Often forget to put things back in their proper place. | (3-) |
| 29. | Get upset easily. | (4-) |
| 30. | Do not have a good imagination. | (5-) |
| 31. | Talk to a lot of different people at parties. | (1+) |
| 32. | Am not really interested in others. | (2-) |
| 33. | Like order. | (3+) |
| 34. | Change my mood a lot. | (4-) |
| 35. | Am quick to understand things. | (5+) |

36.	Don't like to draw attention to myself.	(1-)
37.	Take time out for others.	(2+)
38.	Shirk my duties.	(3-)
39.	Have frequent mood swings.	(4-)
40.	Use difficult words.	(5+)
41.	Don't mind being the center of attention.	(1+)
42.	Feel others' emotions.	(2+)
43.	Follow a schedule.	(3+)
44.	Get irritated easily.	(4-)
45.	Spend time reflecting on things.	(5+)
46.	Am quiet around strangers.	(1-)
47.	Make people feel at ease.	(2+)
48.	Am exacting in my work.	(3+)
49.	Often feel blue.	(4-)
50.	Am full of ideas.	(5+)

The numbers in parentheses after each item indicate the scale on which that item is scored (i.e., of the five factors: (1) Extraversion, (2) Agreeableness, (3) Conscientiousness, (4) Emotional Stability, or (5) Intellect/Imagination) and its direction of scoring (+ or -).

15 item Barratt impulsivity scale

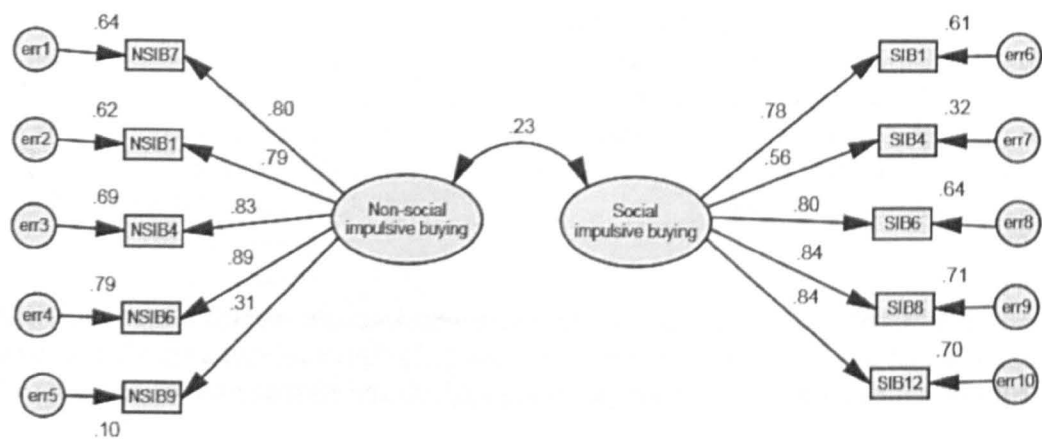
Item	Sub-facet
I act on impulse.	M*
I act on the spur of the moment.	M
I do things without thinking.	M
I say things without thinking.	NP
I buy things on impulse.	M
I plan for job security.	NP*
I plan for the future.	NP*
I save regularly.	NP
I plan tasks carefully.	NP*
I am a careful thinker.	NP*
I am restless at lectures or talks.	A
I squirm at plays or lectures.	A
I concentrate easily.	A*
I don't pay attention.	A
Easily bored solving thought problems.	A

M = Motor impulsivity, NP = Non-planning, A = Attentional impulsivity

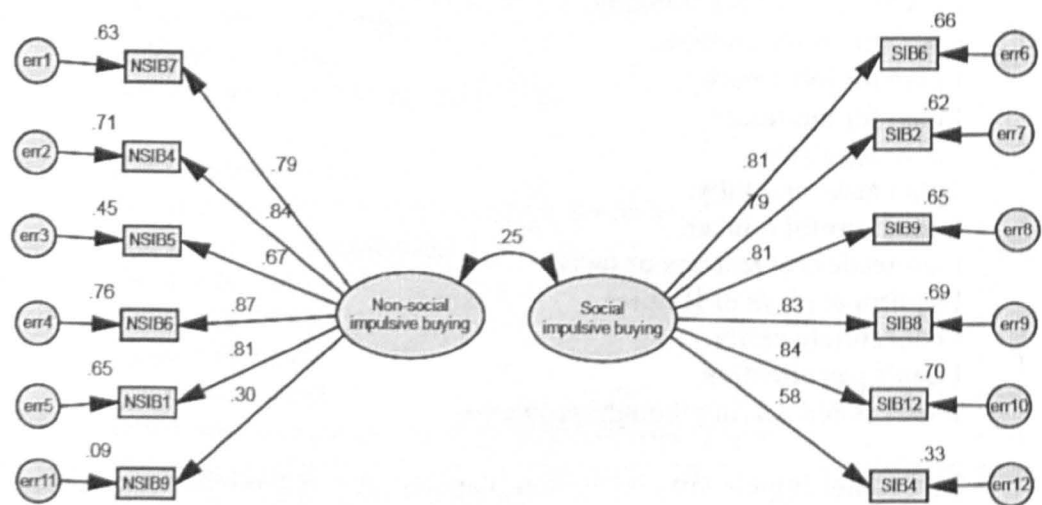
*Reverse coded

Appendix 8: Expanded scale development from phase two

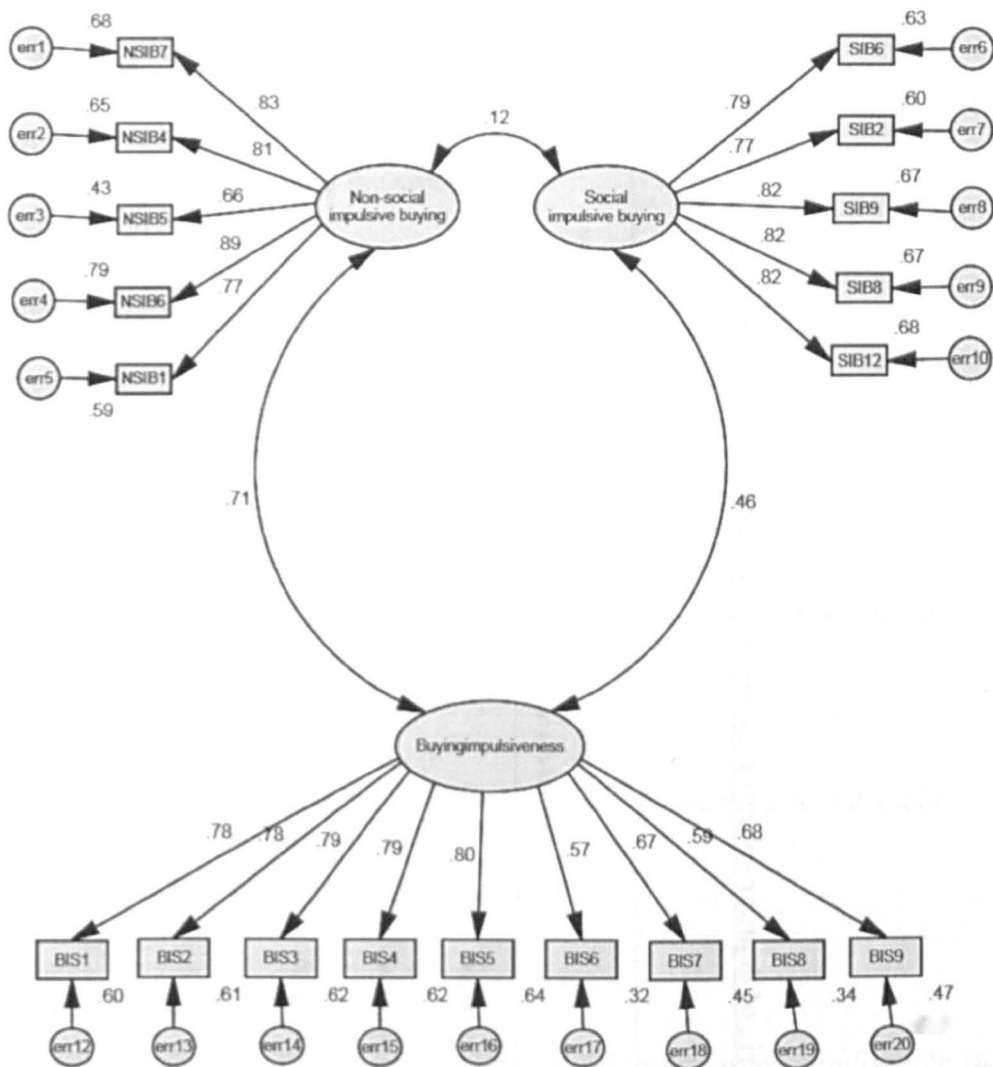
8.1 Measurement model two



8.2 Measurement model three



8.3 Social, non-social and *buying impulsiveness scale* model (full 614 cases of phase one and phase two)



Appendix 9: Full correlation matrix of demographic variables during scale development phase 2

		<i>Buying impulsiveness scale</i>	Non-social impulsive buying	Social impulsive buying	Education	Income	Age
<i>Buying impulsiveness scale</i>	Pearson Correlation	1					
Non-social impulsive buying	Pearson Correlation	.759**	1				
Social impulsive buying	Pearson Correlation	.425**	.231**	1			
Education	Pearson Correlation	-.019	-.007	-.055	1		
Income	Pearson Correlation	.054	.096	.051	.288**	1	
Age	Pearson Correlation	-.153**	-.138**	-.251**	-.068	-.118*	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix 10 – Quasi-experiment pilot draft scenarios

Social:

1) Version A

“Clare is in the shopping centre with a companion, has a list of items she needs to buy including a new pair of shoes. Her friend also has a list of items to buy. Later in the shopping trip the shopping companions go to a department store to choose the shoes. They pass through the clothing section and they spot a great looking sweater that Clare likes and is priced at £40, but it isn't on her list. She tries the top on after encouragement from her companion”

- 1) Buying the shoes only
- 2) Buying the shoes and wanting the sweater
- 3) Deciding not to buy the shoes
- 4) Buying the shoes and the sweater
- 5) Buying both of these plus a matching pair of jeans

2) Version B

“Clare is in the shopping centre with a companion and has a list of items to buy, including a new pair of shoes for work. They both go to a department store to buy the shoes and pass through the clothing section. They spot a great looking sweater for that is priced at £70, but it isn't on Clare's list. She tries the top on after some encouragement from her companion”

- 1) Buying the shoes only
- 2) Wanting the sweater but not buying it
- 3) Deciding not to buy the shoes but to come back later to see the sweater again
- 4) Buying the shoes and the sweater
- 5) Buying both of these plus a matching pair of jeans

3) Version C

“Clare is in the shopping centre with a companion to buy some comfortable shoes for work. They go to a department store to buy the work shoes. In the clothing section there is great looking sweater on sale for over £100. It isn't on Clare's list of things to buy but her companion encourages her to try it on”

- 1) Buying the work shoes only and not trying the top on
- 2) Buying the work shoes and trying the top on
- 3) Deciding not to buy the work shoes but to come back later with her companion to see the sweater again
- 4) Buying the shoes and the sweater using a credit card
- 5) Buying the work shoes, the sweater and a matching item of clothing using a credit card

Non-social

1) Version A:

“Clare is shopping alone in the shopping centre; she has a list of items she needs to buy including a new pair of trainers. Later in the shopping trip she goes into a department store to choose the shoes. She passes through the clothing section and sees a great looking sweater she likes and is priced at £40, but isn’t on her list. She tries the top on”.

- 1) Buying the shoes only
- 2) Buying the shoes and wanting the sweater
- 3) Deciding not to buy the shoes
- 4) Buying the shoes and the sweater
- 5) Buying both of these plus a matching pair of jeans

2) Version B:

Clare is in the shopping centre on her own and has a list of items to buy including a new pair of shoes for work. She goes to a department store to buy the shoes and passes through the clothing section. She spots a great looking sweater priced at £70, it isn’t on Clare’s list but she tries the top on”

- 1) Buying the shoes only
- 2) Wanting the sweater but not buying it
- 3) Deciding not to buy the shoes but to come back later to see the sweater again
- 4) Buying the shoes and the sweater
- 5) Buying both of these plus a matching pair of jeans

3) Version C:

“Clare is alone in the shopping centre to buy some comfortable work shoes. She goes to a department to buy the work shoes. In the clothing section she sees a great looking sweater on sale for over £100 that isn’t on her list of things to buy.”

- 1) Buying the work shoes only and not trying the top on
- 2) Buying the work shoes and trying the top on
- 3) Deciding not to buy the work shoes but to come back later to see the sweater again
- 4) Buying the shoes and the sweater using a credit card
- 5) Buying the work shoes, the sweater and a matching item of clothing using a credit card

Appendix 11: Quasi-experiment information sheet

Information sheet - Consumer behaviour study: Lead researcher Matthew Shawcross

Thank you for your interest in my research, this project is part of the Ph.D I am studying towards at the Open University. The study is investigating consumer shopping behaviour with the aim of understanding more about influences on behaviour. In order to investigate this issue I am in the process of developing a questionnaire.

Please read the following information and find my contact details along with those of my supervisors below

Questionnaire details

- The questionnaire will ask general questions about shopping behaviour, no individual information will be collected and the results will be presented as a whole.

Confidentiality of your information

- All participant information will be fully confidential and will be used only for academic purposes.
- The consent you provide will only be used to prove all participants have given informed consent
- The study fully complies with the data protection and freedom of information acts
- All data will be securely stored, your survey will be assigned a unique ID as the identifying information; this ID will be used to identify your data if you wish to withdraw from the study

How to withdraw your information

- You are free to withdraw at any point of the study or to withdraw your data once you have completed the questionnaire
- If you want to withdraw your data from the study you may contact me using the contact details below and provide the ID you will be given at the end of the survey. I will remove any data associated with that ID immediately.

Prize draw

- Two £50 *lovetoshop* vouchers are offered for the prize draw.
- In order to be entered into the prize draw participants must enter their email address at the end of the second stage of the study.
- The email addresses collected at the end of the second stage will be entered into the prize draw which will involve all entries being assigned a number and then a random number generator will be used to select two winners.
- If you do not want to take part in the prize draw then you can complete the study as normal but not enter your email address at the end of the second stage. Your results will still be collected and used for analysis.

Contact details

- The results of the study will be available to all participants once the study has been completed; again this may be requested using my email or postal address
- If you have any further enquiries about the project please contact matthew.shawcross@open.ac.uk, or Matthew Shawcross, Open University Business School, Walton Hall, MK7 6AA, 01908 655019
If you wish to speak to someone other than the researcher then you may use the following:
Mark Fenton-O'Creevy: m.p.fentonocreevy@open.ac.uk or Sally Dibb: sd4893@openmail.open.ac.uk both at Open University Business School, Walton Hall, MK7 6AA, 01908 655 88

Appendix 12: Quasi-experiment parametric analysis

Test for difference between correlation coefficients

		Non-social impulsive buying	Social impulsive buying	<i>BIS</i>	Social scenario	Non-social scenario
Non-social impulsive buying	z-score	N/A				
Social impulsive buying	z-score	-0.825	N/A			
<i>Buying impulsiveness scale</i>	z-score	0.870	2.108	N/A		
Social scenario	z-score	-0.612	-0.901	-0.123	N/A	
Non-social scenario	z-score	0.015	0.93	-1.274	0.859	N/A

*. Correlation is significant at the 0.05 level (2-tailed).

Combined group one and two full correlation matrix

		Non-social impulsive buying	Social impulsive buying	<i>BIS</i>	Social scenario	Non-social scenario
Non-social impulsive buying	Pearson Correlation	1				
Social impulsive buying	Pearson Correlation	-.042	1			
<i>Buying impulsiveness scale</i>	Pearson Correlation	.428**	.393**	1		
Social scenario	Pearson Correlation	-.033	.443**	.097	1	
Non-social scenario	Pearson Correlation	.203*	.124	.384**	.379**	1

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed).

Appendix 13: Quasi-experiment - gender as grouping variable

Gender			Non-social impulsive buying	Social impulsive buying	BIS	Social scenario	Non- social scenario
Male (n = 23)	Non-social impulsive buying	Correlation	1				
		Coefficient					
	Social impulsive buying	Correlation		1			
		Coefficient	.147				
	<i>Buying impulsiveness scale</i>	Correlation			1		
		Coefficient	.464*	.757**			
	Social scenario	Correlation				1	
Coefficient		.297	.397	.250			
Non-social scenario	Correlation					1	
	Coefficient	.037	-.037	-.120	.663**		
Female (n = 85)	Non-social impulsive buying	Correlation	1				
		Coefficient					
	Social impulsive buying	Correlation		1			
		Coefficient	-.142				
	<i>Buying impulsiveness scale</i>	Correlation			1		
		Coefficient	.351**	.333**			
	Social scenario	Correlation				1	
Coefficient		-.132	.440**	.045			
Non-social scenario	Correlation					1	
	Coefficient	.244*	.116	.368**	.259*		
** Correlation is significant at the 0.01 level (2-tailed)							
* Correlation is significant at the 0.05 level (2-tailed).							